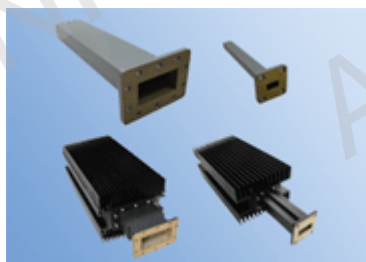
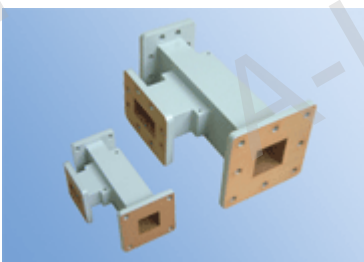


## A-INFO Microwave Waveguide Components



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- Tee(ET/HT/MT)
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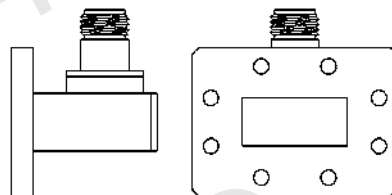
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### WG to Coaxial Adapter - Right Angle



*Freq. = Frequency	*I.L. = Insertion Loss
*Mat. = Material	*N.W.=Net Weight

#### Ordering Information

P/N :

<u>229</u>	<u>WCA</u>	<u>N</u>
WR Size	Product Code	Connector

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical *I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
2300WCAN	0.32-0.49	1.25	N-F	0.12	WR2300	FDP3	Al	15.80
2300WCAS	0.32-0.49	1.25	SMA-F	0.12	WR2300	FDP3	Al	15.75
2300WCA7/16	0.32-0.49	1.25	7/16-F	0.12	WR2300	FDP3	Al	15.85
2100WCAN	0.35-0.53	1.25	N-F	0.12	WR2100	FDP4	Al	12.35
2100WCAS	0.35-0.53	1.25	SMA-F	0.12	WR2100	FDP4	Al	12.30
2100WCA7/16	0.35-0.53	1.25	7/16-F	0.12	WR2100	FDP4	Al	12.40
1800WCAN	0.41-0.62	1.25	N-F	0.12	WR1800	FDP5	Al	10.55
1800WCAS	0.41-0.62	1.25	SMA-F	0.12	WR1800	FDP5	Al	10.50
1800WCA7/16	0.41-0.62	1.25	7/16-F	0.12	WR1800	FDP5	Al	10.60
1500WCAN	0.49-0.75	1.25	N-F	0.12	WR1500	FDP6	Al	6.95
1500WCAS	0.49-0.75	1.25	SMA-F	0.12	WR1500	FDP6	Al	6.90
1500WCA7/16	0.49-0.75	1.25	7/16-F	0.12	WR1500	FDP6	Al	7.00
1150WCAN	0.64-0.96	1.25	N-F	0.12	WR1150	FDP8	Al	4.35
1150WCAS	0.64-0.96	1.25	SMA-F	0.12	WR1150	FDP8	Al	4.30
1150WCA7/16	0.64-0.96	1.25	7/16-F	0.12	WR1150	FDP8	Al	4.40
975WCAN	0.75-1.12	1.25	N-F	0.09	WR975	FDP9	Al	3.45
975WCAS	0.75-1.12	1.25	SMA-F	0.12	WR975	FDP9	Al	3.40
975WCA7/16	0.75-1.12	1.25	7/16-F	0.12	WR975	FDP9	Al	3.50
770WCAN	0.96-1.45	1.25	N-F	0.12	WR770	FDP12	Al	2.40
770WCAS	0.96-1.45	1.25	SMA-F	0.12	WR770	FDP12	Al	2.35
770WCA7/16	0.96-1.45	1.25	7/16-F	0.12	WR770	FDP12	Al	2.45
650WCAN	1.12-1.70	1.25	N-F	0.10	WR650	FDP14	Al	1.25
650WCAS	1.12-1.70	1.25	SMA-F	0.12	WR650	FDP14	Al	1.23
650WCA7/16	1.12-1.70	1.25	7/16-F	0.12	WR650	FDP14	Al	1.30

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical * I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
510WCAN	1.45-2.20	1.25	N-F	0.12	WR510	FDP18	Al	0.90
510WCAS	1.45-2.20	1.25	SMA-F	0.12	WR510	FDP18	Al	0.85
510WCA7/16	1.45-2.20	1.25	7/16-F	0.12	WR510	FDP18	Al	0.95
430WCAN	1.70-2.60	1.25	N-F	0.12	WR430	FDP22	Al	0.65
430WCAS	1.70-2.60	1.25	SMA-F	0.13	WR430	FDP22	Al	0.60
430WCA7/16	1.70-2.60	1.25	7/16-F	0.13	WR430	FDP22	Al	0.70
340WCAN	2.20-3.30	1.25	N-F	0.12	WR340	FDP26	Al	0.50
340WCAS	2.20-3.30	1.25	SMA-F	0.14	WR340	FDP26	Al	0.45
340WCA7/16	2.20-3.30	1.25	7/16-F	0.14	WR340	FDP26	Al	0.55
284WCAN	2.60-3.95	1.25	N-F	0.13	WR284	FDP32	Al	0.35
284WCAS	2.60-3.95	1.25	SMA-F	0.15	WR284	FDP32	Al	0.30
284WCA7/16	2.60-3.95	1.25	7/16-F	0.15	WR284	FDP32	Al	0.40
229WCAN	3.30-4.90	1.25	N-F	0.14	WR229	FDP40	Al	0.19
229WCANM	3.30-4.90	1.25	N-M	0.14	WR229	FDP40	Al	0.19
229WCAS	3.30-4.90	1.25	SMA-F	0.16	WR229	FDP40	Al	0.18
229WCASM	3.30-4.90	1.25	SMA-M	0.16	WR229	FDP40	Al	0.18
229WCAT	3.30-4.90	1.25	TNC-F	0.16	WR229	FDP40	Al	0.19
229WCATM	3.30-4.90	1.25	TNC-M	0.16	WR229	FDP40	Al	0.19
229WCA7	3.30-4.90	1.25	7mm	0.16	WR229	FDP40	Al	0.22
229WCA3.5	3.30-4.90	1.25	3.5mm-F	0.16	WR229	FDP40	Al	0.18
229WCA3.5M	3.30-4.90	1.25	3.5mm-M	0.16	WR229	FDP40	Al	0.18
187WCAN	3.95-5.85	1.25	N-F	0.15	WR187	FDP48	Al	0.17
187WCANM	3.95-5.85	1.25	N-M	0.15	WR187	FDP48	Al	0.17
187WCAS	3.95-5.85	1.25	SMA-F	0.17	WR187	FDP48	Al	0.14
187WCASM	3.95-5.85	1.25	SMA-M	0.17	WR187	FDP48	Al	0.14
187WCAT	3.95-5.85	1.25	TNC-F	0.17	WR187	FDP48	Al	0.14
187WCATM	3.95-5.85	1.25	TNC-M	0.17	WR187	FDP48	Al	0.14
187WCA7	3.95-5.85	1.25	7mm	0.17	WR187	FDP48	Al	0.17
187WCA3.5	3.95-5.85	1.25	3.5mm-F	0.17	WR187	FDP48	Al	0.14
187WCA3.5M	3.95-5.85	1.25	3.5mm-M	0.17	WR187	FDP48	Al	0.14
159WCAN	4.90-7.05	1.25	N-F	0.16	WR159	FDP58	Al	0.13
159WCANM	4.90-7.05	1.25	N-M	0.16	WR159	FDP58	Al	0.13
159WCAS	4.90-7.05	1.25	SMA-F	0.18	WR159	FDP58	Al	0.12
159WCASM	4.90-7.05	1.25	SMA-M	0.18	WR159	FDP58	Al	0.12
159WCAT	4.90-7.05	1.25	TNC-F	0.18	WR159	FDP58	Al	0.12
159WCATM	4.90-7.05	1.25	TNC-M	0.18	WR159	FDP58	Al	0.12
159WCA7	4.90-7.05	1.25	7mm	0.18	WR159	FDP58	Al	0.15
159WCA3.5	4.90-7.05	1.25	3.5mm-F	0.18	WR159	FDP58	Al	0.12
159WCA3.5M	4.90-7.05	1.25	3.5mm-M	0.18	WR159	FDP58	Al	0.12

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical * I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
137WCAN	5.85-8.20	1.25	N-F	0.17	WR137	FDP70	Al	0.10
137WCANM	5.85-8.20	1.25	N-M	0.17	WR137	FDP70	Al	0.10
137WCAS	5.85-8.20	1.25	SMA-F	0.20	WR137	FDP70	Al	0.08
137WCASM	5.85-8.20	1.25	SMA-M	0.20	WR137	FDP70	Al	0.08
137WCAT	5.85-8.20	1.25	TNC-F	0.20	WR137	FDP70	Al	0.09
137WCATM	5.85-8.20	1.25	TNC-M	0.20	WR137	FDP70	Al	0.09
137WCA7	5.85-8.20	1.25	7mm	0.20	WR137	FDP70	Al	0.12
137WCA3.5	5.85-8.20	1.25	3.5mm-F	0.20	WR137	FDP70	Al	0.08
137WCA3.5M	5.85-8.20	1.25	3.5mm-M	0.20	WR137	FDP70	Al	0.08
112WCAN	7.05-10.0	1.25	N-F	0.18	WR112	FBP84	Al	0.07
112WCANM	7.05-10.0	1.25	N-M	0.18	WR112	FBP84	Al	0.07
112WCAS	7.05-10.0	1.25	SMA-F	0.21	WR112	FBP84	Al	0.06
112WCASM	7.05-10.0	1.25	SMA-M	0.21	WR112	FBP84	Al	0.06
112WCAT	7.05-10.0	1.25	TNC-F	0.21	WR112	FBP84	Al	0.06
112WCATM	7.05-10.0	1.25	TNC-M	0.21	WR112	FBP84	Al	0.06
112WCA7	7.05-10.0	1.25	7mm	0.21	WR112	FBP84	Al	0.09
112WCA3.5	7.05-10.0	1.25	3.5mm-F	0.21	WR112	FBP84	Al	0.06
112WCA3.5M	7.05-10.0	1.25	3.5mm-M	0.21	WR112	FBP84	Al	0.06
90WCAN	8.20-12.4	1.25	N-F	0.21	WR90	FBP100	Al	0.06
90WCANM	8.20-12.4	1.25	N-M	0.21	WR90	FBP100	Al	0.06
90WCAS	8.20-12.4	1.25	SMA-F	0.23	WR90	FBP100	Al	0.04
90WCASM	8.20-12.4	1.25	SMA-M	0.23	WR90	FBP100	Al	0.04
90WCAT	8.20-12.4	1.25	TNC-F	0.23	WR90	FBP100	Al	0.04
90WCATM	8.20-12.4	1.25	TNC-M	0.23	WR90	FBP100	Al	0.04
90WCA7	8.20-12.4	1.25	7mm	0.23	WR90	FBP100	Al	0.08
90WCA3.5	8.20-12.4	1.25	3.5mm-F	0.23	WR90	FBP100	Al	0.04
90WCA3.5M	8.20-12.4	1.25	3.5mm-M	0.23	WR90	FBP100	Al	0.04
75WCAN	10.0-15.0	1.25	N-F	0.23	WR75	FBP120	Al	0.04
75WCANM	10.0-15.0	1.25	N-M	0.23	WR75	FBP120	Al	0.04
75WCAS	10.0-15.0	1.25	SMA-F	0.25	WR75	FBP120	Al	0.03
75WCASM	10.0-15.0	1.25	SMA-M	0.25	WR75	FBP120	Al	0.03
75WCAT	10.0-15.0	1.25	TNC-F	0.25	WR75	FBP120	Al	0.03
75WCATM	10.0-15.0	1.25	TNC-M	0.25	WR75	FBP120	Al	0.03
75WCA7	10.0-15.0	1.25	7mm	0.25	WR75	FBP120	Al	0.07
75WCA3.5	10.0-15.0	1.25	3.5mm-F	0.25	WR75	FBP120	Al	0.03
75WCA3.5M	10.0-15.0	1.25	3.5mm-M	0.25	WR75	FBP120	Al	0.03
62WCAN	12.4-18.0	1.25	N-F	0.25	WR62	FBP140	Al	0.04
62WCANM	12.4-18.0	1.25	N-M	0.25	WR62	FBP140	Al	0.04
62WCAS	12.4-18.0	1.25	SMA-F	0.27	WR62	FBP140	Al	0.03
62WCASM	12.4-18.0	1.25	SMA-M	0.27	WR62	FBP140	Al	0.03
62WCAT	12.4-18.0	1.25	TNC-F	0.25	WR62	FBP140	Al	0.03
62WCATM	12.4-18.0	1.25	TNC-M	0.25	WR62	FBP140	Al	0.03



P/N	* Freq. (GHz)	VSWR Max.	Connector	Theoretical * I.L. (dB) Max.	EIA WR	Flange	* Mat.	* N.W.
62WCA7	12.4-18.0	1.25	7mm	0.27	WR62	FBP140	Al	0.06
62WCA3.5	12.4-18.0	1.25	3.5mm-F	0.27	WR62	FBP140	Al	0.03
62WCA3.5M	12.4-18.0	1.25	3.5mm-M	0.27	WR62	FBP140	Al	0.03
51WCAS_Cu	15.0-22.0	1.25	SMA-F	0.29	WR51	FBP180	Cu	0.05
51WCASM_Cu	15.0-22.0	1.25	SMA-M	0.29	WR51	FBP180	Cu	0.05
42WCAS_Cu	18.0-26.5	1.30	SMA-F	0.32	WR42	FBP220	Cu	0.03
42WCASM_Cu	18.0-26.5	1.30	SMA-M	0.32	WR42	FBP220	Cu	0.03
42WCAK_Cu	18.0-26.5	1.30	2.92mm-F	0.32	WR42	FBP220	Cu	0.03
42WCAKM_Cu	18.0-26.5	1.30	2.92mm-M	0.32	WR42	FBP220	Cu	0.03
42WCA3.5_Cu	18.0-26.5	1.30	3.5mm-F	0.32	WR42	FBP220	Cu	0.07
42WCA3.5M_Cu	18.0-26.5	1.30	3.5mm-M	0.32	WR42	FBP220	Cu	0.07
34WCAK_Cu	22.0-33.0	1.25	2.92mm-F	0.35	WR34	FBP260	Cu	0.03
34WCAKM_Cu	22.0-33.0	1.25	2.92mm-M	0.35	WR34	FBP260	Cu	0.03
28WCAK_Cu	26.5-40.0	1.30	2.92mm-F	0.39	WR28	FBP320	Cu	0.02
28WCAKM_Cu	26.5-40.0	1.30	2.92mm-M	0.39	WR28	FBP320	Cu	0.02
28WCA2.4_Cu	26.5-40.0	1.30	2.4mm-F	0.39	WR28	FBP320	Cu	0.02
28WCA2.4M_Cu	26.5-40.0	1.30	2.4mm-M	0.39	WR28	FBP320	Cu	0.02
22WCA2.4_Cu	33.0-50.0	1.50	2.4mm-F	0.41	WR22	FUGP400	Cu	0.035
19WCA2.4_Cu	40.0-50.0	1.50	2.4mm-F	0.80	WR19	FUGP500	Cu	0.035
19WCA1.85_Cu	40.0-60.0	1.50	1.85mm-F	0.80	WR19	FUGP500	Cu	0.035
15WCA1.85_Cu	50.0-65.0	1.50	1.85mm-F	1.20	WR15	FUGP620	Cu	0.02
15WCA1.85_Cu10	50.0-65.0	1.50	1.85mm-F	1.20	WR15	FUGP620	Cu	0.02

### WG to Coaxial Adapter - Endlaunch



* Freq. = Frequency	* Mat. = Material
* N.W.=Net Weight	

Ordering Information  
P/N :

<u>229</u>	<u>WECA</u>	<u>N</u>
WR Size	Product Code	Connector

P/N	* Freq. (GHz)	VSWR Max.	Connector	EIA WR	Flange	* Mat.	* N.W.
430WECAN	1.70-2.60	1.25	N-F	WR430	FDP22	Al	1.14
430WECAS	1.70-2.60	1.25	SMA-F	WR430	FDP22	Al	1.10
340WECAN	2.20-3.30	1.25	N-F	WR340	FDP26	Al	0.78
340WECAS	2.20-3.30	1.25	SMA-F	WR340	FDP26	Al	0.74
284WECAN	2.60-3.95	1.25	N-F	WR284	FDP32	Al	0.47
284WECAS	2.60-3.95	1.25	SMA-F	WR284	FDP32	Al	0.47
229WECAN	3.30-4.90	1.25	N-F	WR229	FDP40	Al	0.31
229WECAS	3.30-4.90	1.25	SMA-F	WR229	FDP40	Al	0.29
187WECAN	3.95-5.85	1.25	N-F	WR187	FDP48	Al	0.22
187WECAS	3.95-5.85	1.25	SMA-F	WR187	FDP48	Al	0.21
159WECAN	4.90-7.05	1.25	N-F	WR159	FDP58	Al	0.18
159WECAS	4.90-7.05	1.25	SMA-F	WR159	FDP58	Al	0.17
137WECAN	5.85-8.20	1.25	N-F	WR137	FDP70	Al	0.14
137WECAS	5.85-8.20	1.25	SMA-F	WR137	FDP70	Al	0.12
112WECAN	7.05-10.0	1.25	N-F	WR112	FBP84	Al	0.09
112WECAS	7.05-10.0	1.25	SMA-F	WR112	FBP84	Al	0.08
90WECAN	8.20-12.4	1.25	N-F	WR90	FBP100	Al	0.08
90WECAS	8.20-12.4	1.25	SMA-F	WR90	FBP100	Al	0.06
75WECAN	10.0-15.0	1.25	N-F	WR75	FBP120	Al	0.07
75WECAS	10.0-15.0	1.25	SMA-F	WR75	FBP120	Al	0.05

P/N	* Freq. (GHz)	VSWR Max.	Connector	EIA WR	Flange	* Mat.	* N.W.
62WECAN	12.4-18.0	1.25	N-F	WR62	FBP140	Al	0.05
62WECAS	12.4-18.0	1.25	SMA-F	WR62	FBP140	Al	0.04
51WECAS_Cu	15.0-22.0	1.25	SMA-F	WR51	FBP180	Cu	0.08
42WECAS_Cu	18.0-26.5	1.25	SMA-F	WR42	FBP220	Cu	0.05
42WECASM_Cu	18.0-26.5	1.25	SMA-M	WR42	FBP220	Cu	0.05
42WECAK_Cu	18.0-26.5	1.25	2.92mm -F	WR42	FBP220	Cu	0.05
34WECAK_Cu	22.0-33.0	1.30	2.92mm -F	WR34	FBP260	Cu	0.05
28WECAK_Cu	26.5-40.0	1.30	2.92mm-F	WR28	FBP320	Cu	0.03
28WECKM_Cu	26.5-40.0	1.30	2.92mm-M	WR28	FBP320	Cu	0.03
28WECA2.4_Cu	26.5-40.0	1.30	2.4mm-F	WR28	FBP320	Cu	0.03
22WECA2.4_Cu	33.0-50.0	2.00	2.4mm-F	WR22	FUGP400	Cu	0.04
19WECA2.4_Cu	40.0-50.0	2.00	2.4mm-F	WR19	FUGP500	Cu	0.03
19WECA1.85_Cu	40.0-60.0	2.00	1.85mm-F	WR19	FUGP500	Cu	0.03
15WECA1.85_Cu	50.0-65.0	2.00	1.85mm-F	WR15	FUGP620	Cu	0.02

### WG to Coaxial Adapter - Double Ridge



* Freq. = Frequency	* Mat. = Material
* N.W.=Net Weight	

#### Ordering Information

P/N :

250	DRWCA	N
WR Size	Product Code	Connector

EIA WRD	P/N	* Freq. (GHz)	VSWR Max.	Connector	Flange	* Mat.	* N.W.
WRD84	84DRWCAN	0.84-2.0	1.30	N-F	FPWRD84D24	Al	1.40
WRD200	200DRWCAN	2.0-4.8	1.30	N-F	FPWRD200D24	Al	0.40
WRD200	200DRWCAS	2.0-4.8	1.30	SMA-F	FPWRD200D24	Al	0.40
WRD250	250DRWCAN	2.6-7.8	1.30	N-F	FPWRD250D30	Al	0.25
WRD250	250DRWCAS	2.6-7.8	1.30	SMA-F	FPWRD250D30	Al	0.20
WRD350	350DRWCAN	3.5-8.2	1.30	N-F	FPWRD350D24	Al	0.17
WRD350	350DRWCAS	3.5-8.2	1.30	SMA-F	FPWRD350D24	Al	0.16
WRD475	475DRWCAN	4.75-11.0	1.30	N-F	FPWRD475D24	Al	0.09
WRD475	475DRWCAS	4.75-11.0	1.30	SMA-F	FPWRD475D24	Al	0.08
WRD580	580DRWCAN_Cu	5.8-16.0	1.30	N-F	FPWRD580D28	Cu	0.16
WRD580	580DRWCAS_Cu	5.8-16.0	1.30	SMA-F	FPWRD580D28	Cu	0.15
WRD650	650DRWCAN_Cu	6.5-18.0	1.30	N-F	FPWRD650D28	Cu	0.13
WRD650	650DRWCAS_Cu	6.5-18.0	1.30	SMA-F	FPWRD650D28	Cu	0.12
WRD750	750DRWCAN_Cu	7.5-18.0	1.30	N-F	FPWRD750D24	Cu	0.11
WRD750	750DRWCAS_Cu	7.5-18.0	1.30	SMA-F	FPWRD750D24	Cu	0.11
WRD110	110DRWCAS_Cu	11.0-26.5	1.40	SMA-F	FPWRD110C24	Cu	0.07
WRD180	180DRWCAK_Cu	18.0-40.0	1.50	2.92mm-F	FPWRD180C24	Cu	0.03

### WG to Coaxial Adapter - Double Ridge Endlaunch



* Freq. = Frequency	* T. I.L. = Theoretical Insertion Loss
* N.W.=Net Weight	* Mat. = Material

Ordering Information  
P/N :

250	DRWECA	N
WR Size	Product Code	Connector

EIA WRD	P/N	* Freq. (GHz)	VSWR Max.	Connector	* T.I.L. (dB) Max.	Flange	* Mat.	* N.W.
WRD84	84DRWECAN	0.84-2.0	1.30	N-F	-	FPWRD84D24	Al	-
WRD200	200DRWECAN	2.0-4.8	1.30	N-F	0.15	FPWRD200D24	Al	-
WRD200	200DRWECAS	2.0-4.8	1.30	SMA-F	0.15	FPWRD200D24	Al	-
WRD250	250DRWECAN	2.6-7.8	1.30	N-F	0.15	FPWRD250D30	Al	-
WRD250	250DRWECAS	2.6-7.8	1.30	SMA-F	0.15	FPWRD250D30	Al	-
WRD350	350DRWECAN	3.5-8.2	1.30	N-F	0.15	FPWRD350D24	Al	-
WRD350	350DRWECAS	3.5-8.2	1.30	SMA-F	0.15	FPWRD350D24	Al	-
WRD475	475DRWECAN	4.75-11.0	1.30	N-F	0.15	FPWRD475D24	Al	-
WRD475	475DRWECAS	4.75-11.0	1.30	SMA-F	0.15	FPWRD475D24	Al	-
WRD580	580DRWECAN_Cu	5.8-16.0	1.30	N-F	0.15	FPWRD580D28	Cu	-
WRD580	580DRWECAS_Cu	5.8-16.0	1.30	SMA-F	0.15	FPWRD580D28	Cu	-
WRD650	650DRWECAN_Cu	6.5-18.0	1.30	N-F	0.15	FPWRD650D28	Cu	0.20
WRD650	650DRWECANM_Cu	6.5-18.0	1.30	N-M	0.15	FPWRD650D28	Cu	0.25
WRD650	650DRWECAS_Cu	6.5-18.0	1.30	SMA-F	0.15	FPWRD650D28	Cu	0.20
WRD750	750DRWECAN_Cu	7.5-18.0	1.30	N-F	0.15	FPWRD750D24	Cu	-
WRD750	750DRWECAS_Cu	7.5-18.0	1.30	SMA-F	0.15	FPWRD750D24	Cu	-
WRD110	110DRWECAS_Cu	11.0-26.5	1.40	SMA-F	0.25	FPWRD110C24	Cu	-
WRD180	180DRWECAK_Cu	18.0-40.0	1.50	2.92mm-F	0.25	FPWRD180C24	Cu	-

### WG to Coaxial Adapter - Double Ridge High Power



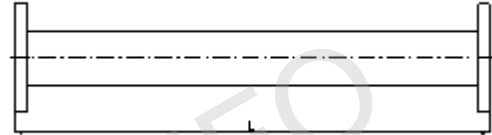
* Freq. = Frequency	* Ave. P.=Average Power
* N.W.=Net Weight	* Mat. = Material

Ordering Information  
P/N :

<u>250</u>	<u>DRWHCA</u>	<u>N</u>
WR Size	Product Code	Connector

EIA WRD	P/N	Freq. (GHz)	VSWR Max.	Connector	Flange	* Ave. P. (W)	* Mat.
WRD84	84DRWHCAN	0.84-2.0	1.30	N-F	FPWRD84D24	1000	Al
WRD200	200DRWHCAN	2.0-4.8	1.30	N-F	FPWRD200D24	1000	Al
WRD250	250DRWHCAN	2.6-7.8	1.30	N-F	FPWRD250D30	1000	Al
WRD350	350DRWHCAN	3.5-8.2	1.30	N-F	FPWRD350D24	750	Al
WRD475	475DRWHCAN	4.75-11.0	1.30	N-F	FPWRD475D24	750	Al
WRD580	580DRWHCAN_Cu	5.8-16.0	1.30	N-F	FPWRD580D28	500	Cu
WRD650	650DRWHCAN_Cu	6.5-18.0	1.30	N-F	FPWRD650D28	500	Cu
WRD750	750DRWHCAN_Cu	7.5-18.0	1.35	N-F	FPWRD750D24	500	Cu

### WG Fixed Attenuator - General Purpose



* Freq. = Frequency	* Atten. = Attenuation
* Mat. = Material	

#### Ordering Information

P/N :

<u>650</u>	<u>WFA</u>	<u>-XX</u>
WR Size	Product Code	Attenuation

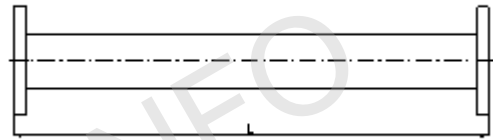
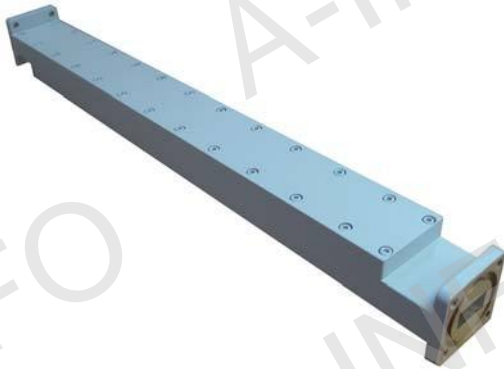
P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	VSWR Max.	Flange	* Mat.
650WFA-XX	1.12-1.70	WR650	3/6/10/ 20/30	1.25	FDP14/FDM14	Al
510WFA-XX	1.45-2.20	WR510	3/6/10/ 20/30	1.25	FDP18/FDM18	Al
430WFA-XX	1.70-2.60	WR430	3/6/10/ 20/30	1.25	FDP22/FDM22	Al/Cu
340WFA-XX	2.20-3.30	WR340	3/6/10/ 20/30	1.25	FDP26/FDM26	Al/Cu
284WFA-XX	2.60-3.95	WR284	3/6/10/ 20/30	1.25	FDP32/FDM32	Al/Cu
229WFA-XX	3.30-4.90	WR229	3/6/10/ 20/30	1.25	FDP40/FDM40	Al/Cu
187WFA-XX	3.95-5.85	WR187	3/6/10/ 20/30	1.25	FDP48/FDM48	Al/Cu
159WFA-XX	4.90-7.05	WR159	3/6/10/ 20/30	1.25	FDP58/FDM58	Al/Cu
137WFA-XX	5.85-8.20	WR137	3/6/10/ 20/30	1.25	FDP70/FDM70	Al/Cu
112WFA-XX	7.05-10.0	WR112	3/6/10/ 20/30	1.25	FBP84/FBM84/ FBE84	Al/Cu
90WFA-XX	8.20-12.4	WR90	3/6/10/ 20/30	1.25	FBP100/FBM100/ FBE100	Al/Cu
75WFA-XX	10.0-15.0	WR75	3/6/10/ 20/30	1.25	FBP120/FBM120/ FBE120	Al/Cu
62WFA-XX	12.4-18.0	WR62	3/6/10/ 20/30	1.25	FBP140/FBM140/ FBE140	Al/Cu
51WFA-XX	15.0-22.0	WR51	3/6/10/ 20/30	1.25	FBP180/FBM180/ FBE180	Cu/Al
42WFA-XX	18.0-26.5	WR42	3/6/10/	1.25	FBP220/FBM220/	Cu/Al

			20/30		FBE220	
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P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	VSWR Max.	Flange	* Mat.
34WFA-XX	22.0-33.0	WR34	3/6/10/ 20/30	1.25	FBP260/FBM260/ FBE260	Cu/Al
28WFA-XX	26.5-40.0	WR28	3/6/10/ 20/30	1.25	FBP320/FBM320/ FBE320	Cu/Al
22WFA-XX_Cu	33.0-50.0	WR22	3/6/10/ 20/30	1.30	FUGP400	Cu
19WFA-XX_Cu	40.0-60.0	WR19	3/6/10/ 0/30	1.30	FUGP500	Cu
15WFA-XX_Cu	50.0-75.0	WR15	3/6/10/ 20/30	1.30	FUGP620	Cu
12WFA-XX_Cu	60.0-90.0	WR12	3/6/10/ 20/30	1.30	FUGP740	Cu
10WFA-XX_Cu	75.0-110.0	WR10	3/6/10/ 20/30	1.30	FUGP900	Cu



### WG Precision Fixed Attenuator – Low Power



* Freq. = Frequency	* Atten. = Attenuation
* Mat. = Material	* Sens. = Sensitivity

#### Ordering Information

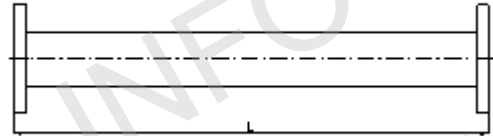
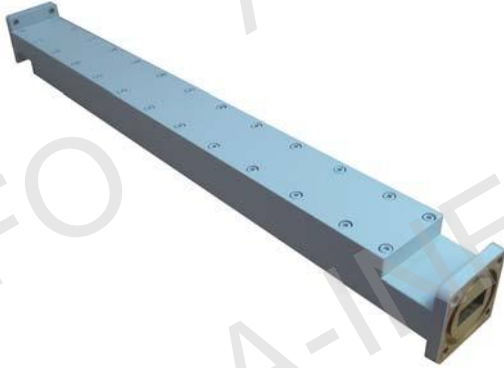
P/N :

<u>284</u>	<u>WPFA</u>	<u>-XX</u>
WR Size	Product Code	Attenuation

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat.
284WPFA-XX	2.60-3.95	WR284	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	10	10	FDP32/ FDM32	Al/Cu
229WPFA-XX	3.30-4.90	WR229	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	10	10	FDP40/ FDM40	Al/Cu
187WPFA-XX	3.95-5.85	WR187	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	8	8	FDP48/ FDM48	Al/Cu
159WPFA-XX	4.90-7.05	WR159	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	7	7	FDP58/ FDM58	Al/Cu
137WPFA-XX	5.85-8.20	WR137	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	6	6	FDP70/ FDM70	Al/Cu
112WPFA-XX	7.05-10.0	WR112	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	4	4	FBP84/ FBM84/ FBE84	Al/Cu
90WPFA-XX	8.20-12.4	WR90	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	4	4	FBP100/ FBM100/ FBE100	Al/Cu
75WPFA-XX	10.0-15.0	WR75	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	2	2	FBP120/ FBM120/ FBE120	Al/Cu
62WPFA-XX	12.4-18.0	WR62	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	1.5	1.5	FBP140/ FBM140/ FBE140	Al/Cu
51WPFA-XX_Cu	15.0-22.0	WR51	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	1	1	FBP180/ FBM180/ FBE180	Cu
42WPFA-XX_Cu	18.0-26.5	WR42	3/6/10/20 /30/40/50	±1.0	±0.9	1.1	0.5	0.5	FBP220/ FBM220/ FBE220	Cu

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat
34WPFA- XX_Cu	22.0-33.0	WR34	3/6/10/20 /30/40/50	±1.0	±0.9	1.1	0.5	0.5	FBP260/ FBM260/ FBE260	Cu
28WPFA- XX_Cu	26.5-40.0	WR28	3/6/10/20 /30/40/50	±1.0	±0.9	1.1	0.5	0.5	FBP320/ FBM320/ FBE320	Cu
22WPFA- XX_Cu	33.0-50.0	WR22	3/6/10/20 /30/40/50	±1.3	±0.9	1.15	0.5	0.5	FUGP400	Cu
19WPFA- XX_Cu	40.0-60.0	WR19	3/6/10/20 /30/40/50	±1.3	±0.9	1.15	0.3	0.3	FUGP500	Cu
15WPFA- XX_Cu	50.0-75.0	WR15	3/6/10/20 /30/40/50	±1.3	±0.9	1.15	0.3	0.1	FUGP620	Cu
12WPFA- XX_Cu	60.0-90.0	WR12	3/6/10/20 /30/40/50	±1.3	±0.9	1.15	0.2	0.03	FUGP740	Cu
10WPFA- XX_Cu	75.0- 110.0	WR10	3/6/10/20 /30/40/50	±1.3	±0.9	1.15	0.2	0.03	FUGP900	Cu

### WG Precision Fixed Attenuator – Low-Medium Power



Ordering Information  
P/N :

* Freq. = Frequency	* Atten. = Attenuation
* Mat. = Material	* Sens. = Sensitivity

<u>284</u>	<u>WPFA</u>	<u>45</u>	<u>-XX</u>
WR Size	Product Code	Avg. Power	Attenuation

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat.
284WPFA45-XX	2.60-3.95	WR284	3/6/10/20/30/40/50	±0.9	±0.7	1.15	45	400	FDP32/ FDM32	Al/Cu
229WPFA40-XX	3.30-4.90	WR229	3/6/10/20/30/40/50	±0.9	±0.7	1.15	40	400	FDP40/ FDM40	Al/Cu
187WPFA40-XX	3.95-5.85	WR187	3/6/10/20/30/40/50	±0.9	±0.7	1.15	40	350	FDP48/ FDM48	Al/Cu
159WPFA30-XX	4.90-7.05	WR159	3/6/10/20/30/40/50	±0.9	±0.7	1.15	30	300	FDP58/ FDM58	Al/Cu
137WPFA25-XX	5.85-8.20	WR137	3/6/10/20/30/40/50	±0.9	±0.7	1.15	25	200	FDP70/ FDM70	Al/Cu
112WPFA25-XX	7.05-10.0	WR112	3/6/10/20/30/40/50	±0.9	±0.7	1.15	25	200	FBP84/ FBM84/ FBE84	Al/Cu
90WPFA25-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.15	25	110	FBP100/ FBM100/ FBE100	Al/Cu
90WPFA50-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.15	50	110	FBP100/ FBM100/ FBE100	Al/Cu
75WPFA5-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.15	5	2	FBP120/ FBM120/ FBE120	Al/Cu
75WPFA25-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.15	25	100	FBP120/ FBM120/ FBE120	Al/Cu
62WPFA3-XX	12.4-18.0	WR62	3/6/10/20/30/40/50	±0.9	±0.7	1.15	3	1.5	FBP140/ FBM140/ FBE140	Al/Cu

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat
62WPFA15-XX	12.4-18.0	WR62	3/6/10/20/30/40/50	±0.9	±0.7	1.15	15	100	FBP140/ FBM140/ FBE140	Al/Cu
51WPFA3-XX_Cu	15.0-22.0	WR51	3/6/10/20/30/40/50	±0.9	±0.7	1.15	3	1	FBP180/ FBM180/ FBE180	Cu
51WPFA15-XX_Cu	15.0-22.0	WR51	3/6/10/20/30/40/50	±0.9	±0.7	1.15	15	60	FBP180/ FBM180/ FBE180	Cu
42WPFA2-XX_Cu	18.0-26.5	WR42	3/6/10/20/30/40/50	±1.0	±0.9	1.15	2	0.5	FBP220/ FBM220/ FBE220	Cu
42WPFA15-XX_Cu	18.0-26.5	WR42	3/6/10/20/30/40/50	±1.0	±0.9	1.15	15	60	FBP220/ FBM220/ FBE220	Cu
34WPFA2-XX_Cu	22.0-33.0	WR34	3/6/10/20/30/40/50	±1.0	±0.9	1.15	2	0.5	FBP260/ FBM260/ FBE260	Cu
34WPFA10-XX_Cu	22.0-33.0	WR34	3/6/10/20/30/40/50	±1.0	±0.9	1.15	10	40	FBP260/ FBM260/ FBE260	Cu
28WPFA2-XX_Cu	26.5-40.0	WR28	3/6/10/20/30/40/50	±1.0	±0.9	1.15	2	0.5	FBP320/ FBM320/ FBE320	Cu
28WPFA10-XX_Cu	26.5-40.0	WR28	3/6/10/20/30/40/50	±1.0	±0.9	1.15	10	25	FBP320/ FBM320/ FBE320	Cu
22WPFA1-XX_Cu	33.0-50.0	WR22	3/6/10/20/30/40/50	±1.3	±0.9	1.2	1	0.5	FUGP400	Cu
22WPFA5-XX_Cu	33.0-50.0	WR22	3/6/10/20/30/40/50	±1.3	±0.9	1.2	5	10	FUGP400	Cu
19WPFA0.6-XX_Cu	40.0-60.0	WR19	3/6/10/20/30/40/50	±1.3	±0.9	1.2	0.6	0.3	FUGP500	Cu
19WPFA3-XX_Cu	40.0-60.0	WR19	3/6/10/20/30/40/50	±1.3	±0.9	1.2	3	3	FUGP500	Cu
15WPFA0.6-XX_Cu	50.0-75.0	WR15	3/6/10/20/30/40/50	±1.3	±0.9	1.2	0.6	0.1	FUGP620	Cu
15WPFA3-XX_Cu	50.0-75.0	WR15	3/6/10/20/30/40/50	±1.3	±0.9	1.2	3	1.5	FUGP620	Cu
12WPFA0.4-XX_Cu	60.0-90.0	WR12	3/6/10/20/30/40/50	±1.3	±0.9	1.2	0.4	0.03	FUGP740	Cu
12WPFA2-XX_Cu	60.0-90.0	WR12	3/6/10/20/30/40/50	±1.3	±0.9	1.2	2	1	FUGP740	Cu
10WPFA0.4-XX_Cu	75.0-110.0	WR10	3/6/10/20/30/40/50	±1.3	±0.9	1.2	0.4	0.03	FUGP900	Cu
10WPFA2-XX_Cu	75.0-110.0	WR10	3/6/10/20/30/40/50	±1.3	±0.9	1.2	2	1	FUGP900	Cu

### WG Precision Fixed Attenuator – Medium Power



#### Ordering Information

P/N :

* Freq. = Frequency	* Atten. = Attenuation
* Mat. = Material	* Sens. = Sensitivity

<u>284</u>	<u>WPFA</u>	<u>1200</u>	<u>-XX</u>
WR Size	Product Code	Avg. Power	Attenuation

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat.
284WPFA1200-XX	2.60-3.95	WR284	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	1200	800	FDP32/ FDM32	AI
229WPFA1000-XX	3.30-4.90	WR229	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	1000	800	FDP40/ FDM40	AI
187WPFA750-XX	3.95-5.85	WR187	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	750	750	FDP48/ FDM48	AI
159WPFA625-XX	4.90-7.05	WR159	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	625	625	FDP58/ FDM58	AI
137WPFA500-XX	5.85-8.20	WR137	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	500	400	FDP70/ FDM70	AI
112WPFA425-XX	7.05-10.0	WR112	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	425	400	FBP84/ FBM84/ FBE84	AI
90WPFA225-XX	8.20-12.4	WR90	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	225	225	FBP100/ FBM100/ FBE100	AI
75WPFA200-XX	10.0-15.0	WR75	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	200	200	FBP120/ FBM120/ FBE120	AI
62WPFA100-XX	12.4-18.0	WR62	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	100	200	FBP140/ FBM140/ FBE140	AI
51WPFA100-XX	15.0-22.0	WR51	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	100	120	FBP180/ FBM180/ FBE180	AI

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat
42WPFA100- XX	18.0-26.5	WR42	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	100	120	FBP220/ FBM220/ FBE220	Al
34WPFA75- XX	22.0-33.0	WR34	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	75	80	FBP260/ FBM260/ FBE260	Al
28WPFA75- XX	26.5-40.0	WR28	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	75	50	FBP320/ FBM320/ FBE320	Al

### WG Precision Fixed Attenuator – High Power



#### Ordering Information

P/N :

* Freq. = Frequency	* Atten. = Attenuation
* Mat. = Material	* Sens. = Sensitivity

<u>284</u>	<u>WPFA</u>	<u>2400</u>	<u>-XX</u>
WR Size	Product Code	Avg. Power	Attenuation

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat.
284WPFA2400-XX	2.60-3.95	WR284	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	2400	800	FDP32/ FDM32	Al
284WPFA3500-XX	2.60-3.95	WR284	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	3500	3200	FDP32/ FDM32	Al
284WPFA5000-XX	2.60-3.95	WR284	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	5000	3200	FDP32/ FDM32	Al
229WPFA2000-XX	3.30-4.90	WR229	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	2000	800	FDP40/ FDM40	Al
229WPFA3000-XX	3.30-4.90	WR229	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	3000	2000	FDP40/ FDM40	Al
229WPFA4000-XX	3.30-4.90	WR229	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	4000	2000	FDP40/ FDM40	Al
187WPFA1500-XX	3.95-5.85	WR187	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	1500	750	FDP48/ FDM48	Al
187WPFA2000-XX	3.95-5.85	WR187	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	2000	2000	FDP48/ FDM48	Al
187WPFA3000-XX	3.95-5.85	WR187	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	3000	2000	FDP48/ FDM48	Al
159WPFA1300-XX	4.90-7.05	WR159	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	1300	625	FDP58/ FDM58	Al
159WPFA2000-XX	4.90-7.05	WR159	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	2000	1000	FDP58/ FDM58	Al
159WPFA3000-XX	4.90-7.05	WR159	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	3000	1000	FDP58/ FDM58	Al

P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat.
137WPFA1000-XX	5.85-8.20	WR137	3/6/10/20/30/40/50	±0.9	±0.7	1.15	1000	400	FDP70/ FDM70	Al
137WPFA1500-XX	5.85-8.20	WR137	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1500	400	FDP70/ FDM70	Al
137WPFA3000-XX	5.85-8.20	WR137	3/6/10/20/30/40/50	±0.9	±0.7	1.1	3000	710	FDP70/ FDM70	Al
112WPFA850-XX	7.05-10.0	WR112	3/6/10/20/30/40/50	±0.9	±0.7	1.15	850	400	FBP84/ FBM84/ FBE84	Al
112WPFA1500-XX	7.05-10.0	WR112	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1500	400	FBP84/ FBM84/ FBE84	Al
112WPFA2000-XX	7.05-10.0	WR112	3/6/10/20/30/40/50	±0.9	±0.7	1.1	2000	460	FBP84/ FBM84/ FBE84	Al
90WPFA500-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.15	500	225	FBP100/ FBM100/ FBE100	Al
90WPFA750-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.15	750	225	FBP100/ FBM100/ FBE100	Al
90WPFA1100-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1100	290	FBP100/ FBM100/ FBE100	Al
90WPFA1700-XX	8.20-12.4	WR90	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1700	290	FBP100/ FBM100/ FBE100	Al
75WPFA350-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.15	350	200	FBP120/ FBM120/ FBE120	Al
75WPFA550-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.15	550	200	FBP120/ FBM120/ FBE120	Al
75WPFA1000-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1000	200	FBP120/ FBM120/ FBE120	Al
75WPFA1500-XX	10.0-15.0	WR75	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1500	250	FBP120/ FBM120/ FBE120	Al
62WPFA300-XX	12.4-18.0	WR62	3/6/10/20/30/40/50	±0.9	±0.7	1.15	300	200	FBP140/ FBM140/ FBE140	Al
62WPFA800-XX	12.4-18.0	WR62	3/6/10/20/30/40/50	±0.9	±0.7	1.1	800	200	FBP140/ FBM140/ FBE140	Al
62WPFA1400-XX	12.4-18.0	WR62	3/6/10/20/30/40/50	±0.9	±0.7	1.1	1400	200	FBP140/ FBM140/ FBE140	Al



P/N	* Freq. (GHz)	EIA WR	* Atten. (dB)	* Atten. Accuracy (dB)	* Atten. * Sens. (dB)	VSWR Max.	Avg. Power (W)	Peak Power (kW)	Flange	* Mat
51WPFA260-XX	15.0-22.0	WR51	3/6/10/20 /30/40/50	±0.9	±0.7	1.15	260	120	FBP180/ FBM180/ FBE180	Al
51WPFA700-XX	15.0-22.0	WR51	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	700	150	FBP180/ FBM180/ FBE180	Al
51WPFA1200-XX	15.0-22.0	WR51	3/6/10/20 /30/40/50	±0.9	±0.7	1.1	1200	150	FBP180/ FBM180/ FBE180	Al
42WPFA230-XX	18.0-26.5	WR42	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	230	120	FBP220/ FBM220/ FBE220	Al
42WPFA600-XX	18.0-26.5	WR42	3/6/10/20 /30/40/50	±1.0	±0.9	1.15	600	120	FBP220/ FBM220/ FBE220	Al
42WPFA1000-XX	18.0-26.5	WR42	3/6/10/20 /30/40/50	±1.0	±0.9	1.15	1000	120	FBP220/ FBM220/ FBE220	Al
34WPFA150-XX	22.0-33.0	WR34	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	150	80	FBP260/ FBM260/ FBE260	Al
34WPFA400-XX	22.0-33.0	WR34	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	400	80	FBP260/ FBM260/ FBE260	Al
34WPFA700-XX	22.0-33.0	WR34	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	700	80	FBP260/ FBM260/ FBE260	Al
28WPFA125-XX	26.5-40.0	WR28	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	125	50	FBP320/ FBM320/ FBE320	Al
28WPFA300-XX	26.5-40.0	WR28	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	300	100	FBP320/ FBM320/ FBE320	Al
28WPFA500-XX	26.5-40.0	WR28	3/6/10/20 /30/40/50	±1.0	±0.9	1.2	500	100	FBP320/ FBM320/ FBE320	Al

### Straight WG - Rectangular



WR8



WR5



WR3



8WAL-30\_Cu\_P0P0

5WAL-30\_Cu\_P0P0

3WAL-30\_Cu\_P0P0

#### Ordering Information P/N :

\*Freq. = Frequency

\*Mat. = Material

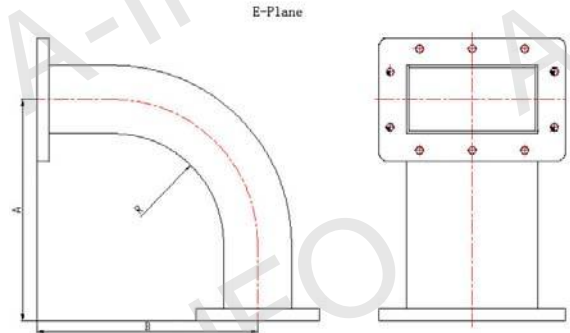
<u>975</u>	<u>WAL</u>	<u>-XX</u>
WR Size	Product Code	Length (mm)

P/N	*Freq. (GHz)	VSWR Max.	Standard Length(mm)	EIA WR	Flange	*Mat.
975WAL-XX	0.75-1.12	1.05	500	WR975	FDP9	Al
770WAL-XX	0.96-1.45	1.05	500	WR770	FDP12	Al
650WAL-XX	1.12-1.70	1.05	500	WR650	FDP14/FDM14	Al
510WAL-XX	1.45-2.20	1.05	500	WR510	FDP18/FDM18	Al
430WAL-XX	1.70-2.60	1.05	50/100/200/300/500	WR430	FDP22/FDM22	Al
340WAL-XX	2.20-3.30	1.05	50/75/100/200/300/500	WR340	FDP26/FDM26	Al
284WAL-XX	2.60-3.95	1.05	50/100/200/300/500/1000	WR284	FDP32/FDM32	Al
229WAL-XX	3.30-4.90	1.05	50/100/200/300/500	WR229	FDP40/FDM40	Al
187WAL-XX	3.95-5.85	1.05	100/200/300/500/1000/ 1200	WR187	FDP48/FDM48	Al
159WAL-XX	4.90-7.05	1.05	100/200/300/500	WR159	FDP58/FDM58	Al
137WAL-XX	5.85-8.20	1.05	100/200/300	WR137	FDP70/FDM70	Al
112WAL-XX	7.05-10.0	1.05	50/100/200/300	WR112	FBP84/FBM84/ FBE84	Al
90WAL-XX	8.20-12.4	1.05	50/100/150/200/300/500/ 1000	WR90	FBP100/FBM100/ FBE100	Al
75WAL-XX	10.0-15.0	1.05	50/100/200/300/500/1000	WR75	FBP120/FBM120/ FBE120	Al
62WAL-XX	12.4-18.0	1.05	50/100/150/200/300	WR62	FBP140/FBM140/ FBE140	Al

P/N	* Freq. (GHz)	VSWR Max.	Standard Length (mm)	EIA WR	Flange	* Mat.
51WAL-XX_Cu	15.0-22.0	1.05	100	WR51	FBP180/FBM180/FBE180	Cu
42WAL-XX_Cu	18.0-26.5	1.05	50/100/200/300/500/1000	WR42	FBP220/FBM220/FBE220	Cu
34WAL-XX_Cu	22.0-33.0	1.05	100	WR34	FBP260/FBM260/FBE260	Cu
28WAL-XX_Cu	26.5-40.0	1.05	20/50/100/200/300/500/1000	WR28	FBP320/FBM320/FBE320	Cu
22WAL-XX_Cu	33.0-50.0	1.10	50	WR22	FUGP400	Cu
19WAL-XX_Cu	40.0-60.0	1.10	50/100	WR19	FUGP500	Cu
15WAL-XX_Cu	50.0-75.0	1.10	50	WR15	FUGP620	Cu
12WAL-XX_Cu	60.0-90.0	1.10	50	WR12	FUGP740	Cu
10WAL-XX_Cu	75.0-110.0	1.10	50	WR10	FUGP900	Cu
8WAL-XX_Cu_P0P0	90.0-140.0	1.10	30	WR8	APF8	Cu
6WAL-XX_Cu_P0P0	110.0-170.0	1.10	30	WR6	APF6	Cu
5WAL-XX_Cu_P0P0	140.0-220.0	1.20	30	WR5	APF5	Cu
4WAL-XX_Cu_P0P0	170.0-260.0	1.20	30	WR4	APF4	Cu
3WAL-XX_Cu_P0P0	220.0-325.0	1.20	30	WR3	APF3	Cu

Note: The length can be customized.

### Bend - Radius (90° E-Plane)



#### Ordering Information

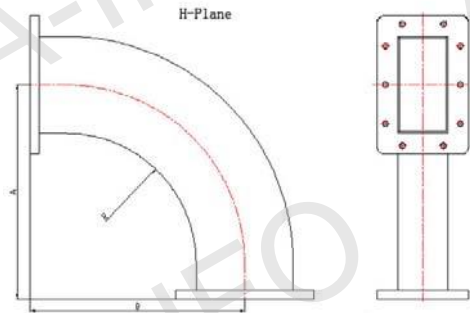
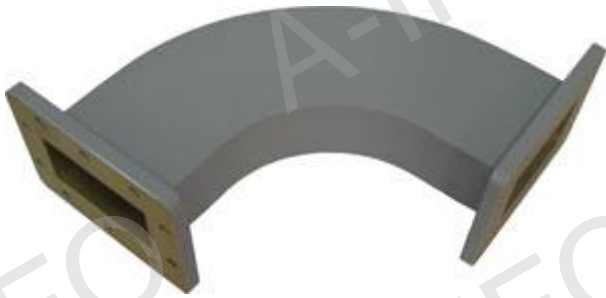
P/N :

* Freq. = Frequency	* Mat. = Material
* N.W.=Net Weight	

<u>430</u>	<u>WEB</u>	<u>-A</u>	<u>-B</u>	<u>-R</u>
WR Size	Product Code	Size A (mm)	Size B (mm)	Size R (mm)

P/N	* Freq. (GHz)	VSWR Max.	EIA WR	Flange	* Mat.	* N.W.
430WEB-190-190-95	1.70-2.60	1.15	WR430	FDP22/FDM22	Al/Cu	1.17
340WEB-100-100-40	2.20-3.30	1.15	WR340	FDP26/FDM26	Al/Cu	-
284WEB-100-100-40	2.60-3.95	1.15	WR284	FDP32/FDM32	Al/Cu	-
229WEB-80-80-40	3.30-4.90	1.15	WR229	FDP40/FDM40	Al/Cu	0.30
187WEB-80-80-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu	0.31
159WEB-80-80-40	4.90-7.05	1.15	WR159	FDP58/FDM58	Al/Cu	-
137WEB-60-60-30	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu	0.30
112WEB-50-50-25	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu	0.08
90WEB-55-55-35	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al	0.08
90WEB-50-50-20	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al	0.06
75WEB-50-50-20_Cu	10.0-15.0	1.15	WR75	FBP120/FBM120/FBE120	Cu	0.15
62WEB-40-40-20_Cu	12.4-18.0	1.15	WR62	FBP140/FBM140/FBE140	Al/Cu	0.10
51WEB-30-30-15	15.0-22.0	1.15	WR51	FBP180/FBM180/FBE180	Al/Cu	-
42WEB-30-30-15	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Al	0.01
42WEB-30-30-15_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu	0.05
34WEB-30-30-15	22.0-33.0	1.15	WR34	FBP260/FBM260/FBE260	Al/Cu	-
28WEB-25-25-10_Cu	26.5-40.0	1.15	WR28	FBP320/FBM320/FBE320	Cu	0.05
22WEB-25-25-10_Cu	33.0-50.0	1.15	WR22	FUGP400	Cu	0.04
19WEB-25-25-10_Cu	40.0-60.0	1.15	WR19	FUGP500	Cu	-
15WEB-20-20-10_Cu	50.0-75.0	1.15	WR15	FUGP620	Cu	0.02
12WEB-20-20-10_Cu	60.0-90.0	1.15	WR12	FUGP740	Cu	0.02
10WEB-20-20-10_Cu	75.0-110.0	1.15	WR10	FUGP900	Cu	0.015

### Bend - Radius (90° H-Plane)



#### Ordering Information

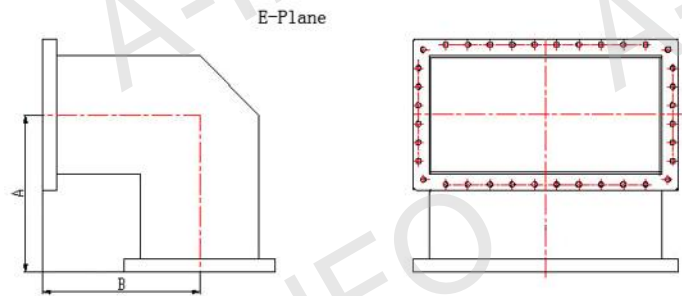
P/N :

* Freq. = Frequency	* Mat. = Material
* N.W.=Net Weight	

<u>430</u>	<u>WHB</u>	<u>-A</u>	<u>-B</u>	<u>-R</u>
WR Size	Product Code	Size A (mm)	Size B (mm)	Size R (mm)

P/N	* Freq. (GHz)	VSWR Max.	EIA WR	Flange	* Mat.	* N.W.
430WHB-250-250-152	1.70-2.60	1.15	WR430	FDP22/FDM22	Al/Cu	-
340WHB-180-180-100	2.20-3.30	1.15	WR340	FDP26/FDM26	Al/Cu	-
284WHB-160-160-100	2.60-3.95	1.15	WR284	FDP32/FDM32	Al/Cu	0.6/Al
229WHB-120-120-78	3.30-4.90	1.15	WR229	FDP40/FDM40	Al/Cu	-
187WHB-80-80-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu	-
159WHB-80-80-40	4.90-7.05	1.15	WR159	FDP58/FDM58	Al/Cu	-
137WHB-80-80-50	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu	-
112WHB-50-50-25	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu	0.08/Al
90WHB-50-50-20	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al/Cu	0.06/Al
75WHB-50-50-20_Cu	10.0-15.0	1.15	WR75	FBP120/FBM120/FBE120	Cu	0.15
62WHB-40-40-25_Cu	12.4-18.0	1.15	WR62	FBP140/FBM140/FBE140	Cu	0.10
51WHB-35-35-20	15.0-22.0	1.15	WR51	FBP180/FBM180/FBE180	Al/Cu	-
42WHB-35-35-20	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Al	0.01
42WHB-35-35-20_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu	0.05
34WHB-35-35-20	22.0-33.0	1.15	WR34	FBP260/FBM260/FBE260	Al/Cu	-
28WHB-30-30-15_Cu	26.5-40.0	1.15	WR28	FBP320/FBM320/FBE320	Cu	-
22WHB-20-20-10_Cu	33.0-50.0	1.15	WR22	FUGP400	Cu	-
19WHB-25-25-10_Cu	40.0-60.0	1.15	WR19	FUGP500	Cu	-
15WHB-25-25-10_Cu	50.0-75.0	1.15	WR15	FUGP620	Cu	0.021
12WHB-25-25-10_Cu	60.0-90.0	1.15	WR12	FUGP740	Cu	0.02
10WHB-25-25-10_Cu	75.0-110.0	1.15	WR10	FUGP900	Cu	0.015

### Bend - Miter (90° E-Plane)



#### Ordering Information

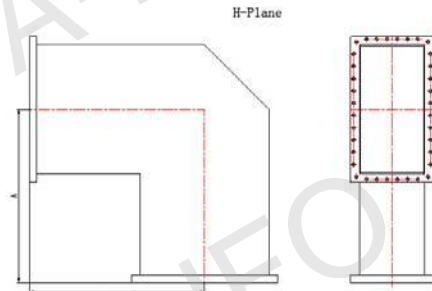
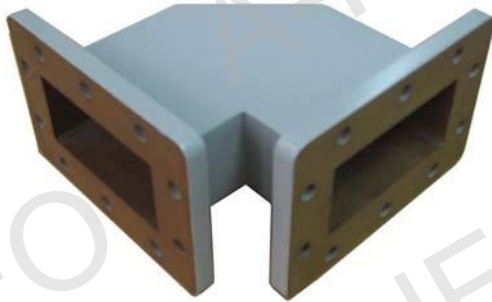
P/N :

\* Freq. = Frequency    \* Mat. = Material

<u>650</u>	<u>WTEB</u>	<u>-A</u>	<u>-B</u>
WR Size	Product Code	Size A (mm)	Size B (mm)

P/N	* Freq. (GHz)	VSWR Max.	EIA WR	Flange	* Mat.
975WTEB-150-150	0.75-1.12	1.20	WR975	FDP9	Al
770WTEB-100-100	0.96-1.45	1.20	WR770	FDP12	Al
650WTEB-100-100	1.12-1.70	1.20	WR650	FDP14/FDM14	Al
510WTEB-80-80	1.45-2.20	1.20	WR510	FDP18/FDM18	Al/Cu
430WTEB-80-80	1.70-2.60	1.20	WR430	FDP22/FDM22	Al/Cu
340WTEB-60-60	2.20-3.30	1.20	WR340	FDP26/FDM26	Al/Cu
284WTEB-50-50	2.60-3.95	1.20	WR284	FDP32/FDM32	Al/Cu
229WTEB-45-45	3.30-4.90	1.20	WR229	FDP40/FDM40	Al/Cu
187WTEB-40-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu
159WTEB-40-40	4.90-7.05	1.20	WR159	FDP58/FDM58	Al/Cu
137WTEB-51-51	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu
112WTEB-35-35	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu
90WTEB-30-30	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al/Cu
75WTEB-25-25	10.0-15.0	1.20	WR75	FBP120/FBM120/FBE120	Al/Cu
62WTEB-25-25	12.4-18.0	1.20	WR62	FBP140/FBM140/FBE140	Al/Cu
51WTEB-20-20_Cu	15.0-22.0	1.20	WR51	FBP180/FBM180/FBE180	Cu
42WTEB-20-20_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu
34WTEB-20-20_Cu	22.0-33.0	1.20	WR34	FBP260/FBM260/FBE260	Cu
28WTEB-15-15_Cu	26.5-40.0	1.20	WR28	FBP320/FBM320/FBE320	Cu

### Bend - Miter (90° H-Plane)



#### Ordering Information

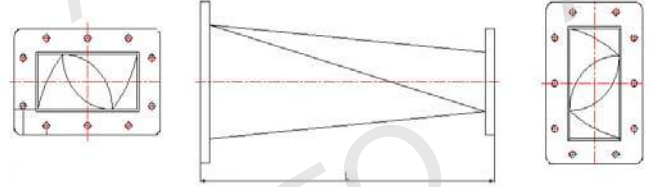
P/N :

\*Freq. = Frequency    \*Mat. = Material

<u>650</u>	<u>WTHB</u>	<u>-A</u>	<u>-B</u>
WR Size	Product Code	Size A (mm)	Size B (mm)

P/N	*Freq. (GHz)	VSWR Max.	EIA WR	Flange	*Mat.
975WTHB-250-250	0.75-1.12	1.30	WR975	FDP9	Al
770WTHB-200-200	0.96-1.45	1.30	WR770	FDP12	Al
650WTHB-180-180	1.12-1.70	1.30	WR650	FDP14/FDM14	Al
510WTHB-150-150	1.45-2.20	1.30	WR510	FDP18/FDM18	Al/Cu
430WTHB-80-80	1.70-2.60	1.30	WR430	FDP22/FDM22	Al/Cu
340WTHB-60-60	2.20-3.30	1.30	WR340	FDP26/FDM26	Al/Cu
284WTHB-80-80	2.60-3.95	1.30	WR284	FDP32/FDM32	Al/Cu
229WTHB-65-65	3.30-4.90	1.30	WR229	FDP40/FDM40	Al/Cu
187WTHB-55-55	3.95-5.85	1.30	WR187	FDP48/FDM48	Al/Cu
159WTHB-55-55	4.90-7.05	1.30	WR159	FDP58/FDM58	Al/Cu
137WTHB-51-51	5.85-8.20	1.30	WR137	FDP70/FDM70	Al/Cu
112WTHB-35-35	7.05-10.0	1.30	WR112	FBP84/FBM84/FBE84	Al/Cu
90WTHB-30-30	8.20-12.4	1.30	WR90	FBP100/FBM100/FBE100	Al/Cu
75WTHB-25-25	10.0-15.0	1.30	WR75	FBP120/FBM120/FBE120	Al/Cu
62WTHB-25-25	12.4-18.0	1.30	WR62	FBP140/FBM140/FBE140	Al/Cu
51WTHB-20-20_Cu	15.0-22.0	1.30	WR51	FBP180/FBM180/FBE180	Cu
42WTHB-20-20_Cu	18.0-26.5	1.30	WR42	FBP220/FBM220/FBE220	Cu
34WTHB-20-20_Cu	22.0-33.0	1.30	WR34	FBP260/FBM260/FBE260	Cu
28WTHB-15-15_Cu	26.5-40.0	1.30	WR28	FBP320/FBM320/FBE320	Cu

### Twist WG - Rectangular



#### Ordering Information

P/N :

*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

<u>430</u>	<u>WTA</u>	<u>-800</u>
WR Size	Product Code	Length (mm)

P/N	*Freq. (GHz)	VSWR Max.	EIA WR	Length (mm)	Flange	*Mat.	*N.W.
430WTA-800	1.70-2.60	1.10	WR430	800	FDP22/FDM22	Al/Cu	-
340WTA-500	2.20-3.30	1.10	WR340	500	FDP26/FDM26	Al/Cu	1.18
284WTA-300	2.60-3.95	1.10	WR284	300	FDP32/FDM32	Al/Cu	-
229WTA-250	3.30-4.90	1.10	WR229	250	FDP40/FDM40	Al/Cu	-
187WTA-200	3.95-5.85	1.10	WR187	200	FDP48/FDM48	Al/Cu	0.30
159WTA-200	4.90-7.05	1.10	WR159	200	FDP58/FDM58	Al/Cu	0.30
137WTA-150	5.85-8.20	1.10	WR137	150	FDP70/FDM70	Al/Cu	0.16
112WTA-120	7.05-10.0	1.10	WR112	120	FBP84/FBM84/FBE84	Al/Cu	-
90WTA-100	8.20-12.4	1.10	WR90	100	FBP100/FBM100/FBE100	Al/Cu	0.06
75WTA-90	10.0-15.0	1.15	WR75	90	FBP120/FBM120/FBE120	Al	0.06
75WTA-100_Cu	10.0-15.0	1.15	WR75	100	FBP120/FBM120/FBE120	Cu	0.16
62WTA-75_Cu	12.4-18.0	1.10	WR62	75	FBP140/FBM140/FBE140	Cu	0.10
51WTA-70_Cu	15.0-22.0	1.10	WR51	70	FBP180/FBM180/FBE180	Cu	-
42WTA-60_Cu	18.0-26.5	1.10	WR42	60	FBP220/FBM220/FBE220	Cu	-
34WTA-55_Cu	22.0-33.0	1.10	WR34	55	FBP260/FBM260/FBE260	Cu	-
28WTA-55_Cu	26.5-40.0	1.10	WR28	55	FBP320/FBM320/FBE320	Cu	0.06
22WTA-50_Cu	33.0-50.0	1.10	WR22	50	FUGP400	Cu	-
19WTA-50_Cu	40.0-60.0	1.10	WR19	50	FUGP500	Cu	-
15WTA-50_Cu	50.0-75.0	1.10	WR15	50	FUGP620	Cu	0.02
12WTA-50_Cu	60.0-90.0	1.10	WR12	50	FUGP740	Cu	0.02
10WTA-50_Cu	75.0-110.0	1.10	WR10	50	FUGP900	Cu	-



### Straight WG - Double Ridge



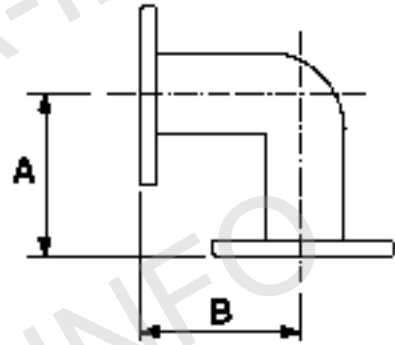
#### Ordering Information

P/N :

<u>250</u>	<u>DRWAL</u>	<u>-XXX</u>
WR Size	Product Code	Length(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR Max.	Length (XXX) (mm)	Flange	Material
WRD250	250DRWAL-XXX	2.6-7.8	1.15	Customized	FPWRD250D30	Al
WRD350	350DRWAL-XXX	3.5-8.2	1.15	Customized	FPWRD350D24	Al
WRD475	475DRWAL-XXX	4.75-11.0	1.15	Customized	FPWRD475D24	Al
WRD580	580DRWAL-XXX_Cu	5.8-16.0	1.15	Customized	FPWRD580D28	Cu
WRD650	650DRWAL-XXX_Cu	6.5-18.0	1.15	Customized	FPWRD650D28	Cu
WRD750	750DRWAL-XXX_Cu	7.5-18.0	1.15	Customized	FPWRD750D24	Cu
WRD180	180DRWAL-XXX_Cu	18.0-40.0	1.15	Customized	FPWRD180C24	Cu

### Bend - Double Ridge (E-Plane)



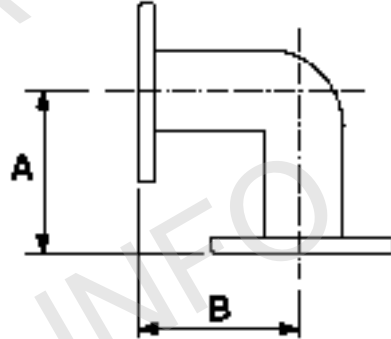
#### Ordering Information

P/N :

<u>650</u>	<u>DRWEB</u>	<u>-A</u>	<u>-B</u>
WR Size	Product Code	Size A(mm)	Size B(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR Max.	Flange	Material	Size A,B (mm)
WRD650	650DRWEB-A-B_Cu	6.5-18.0	1.20	FPWRD650D28	Cu	Customized
WRD750	750DRWEB-A-B_Cu	7.5-18.0	1.20	FPWRD750D24	Cu	Customized

### Bend - Double Ridge (H-Plane)



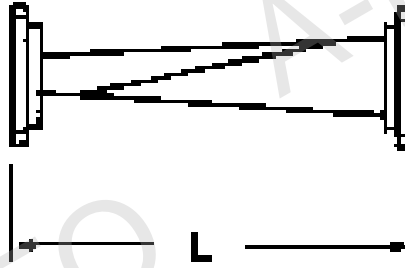
#### Ordering Information

P/N :

<u>650</u>	<u>DRWHB</u>	<u>-A</u>	<u>-B</u>
WR Size	Product Code	Size A(mm)	Size B(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR Max.	Flange	Material	Size A,B (mm)
WRD650	650DRWHB-A-B Cu	6.5-18.0	1.20	FPWRD650D28	Cu	Customized
WRD750	750DRWHB-A-B Cu	7.5-18.0	1.20	FPWRD750D24	Cu	Customized

### Twist WG - Double Ridge



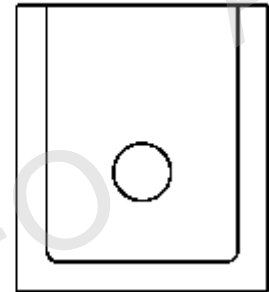
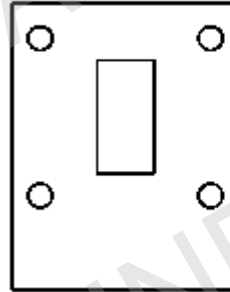
#### Ordering Information

P/N :

<u>250</u>	<u>DRWTA</u>	<u>-XXX</u>
WR Size	Product Code	Length (mm)

EIA WRD	P/N	Frequency (GHz)	VSWR	Length (XXX) (mm)	Flange	Material
WRD250	250DRWTA-XXX	2.6-7.8	1.25	Customized	FPWRD250D30	Al
WRD350	350DRWTA-XXX	3.5-8.2	1.25	Customized	FPWRD350D24	Al
WRD475	475DRWTA-XXX	4.75-11.0	1.25	Customized	FPWRD475D24	Al
WRD580	580DRWTA-XXX_Cu	5.8-16.0	1.25	Customized	FPWRD580D28	Cu
WRD650	650DRWTA-XXX_Cu	6.5-18.0	1.25	Customized	FPWRD650D28	Cu
WRD750	750DRWTA-XXX_Cu	7.5-18.0	1.25	Customized	FPWRD750D24	Cu
WRD180	180DRWTA-XXX_Cu	18.0-40.0	1.25	Customized	FPWRD180C24	Cu

### WG Circulator



#### Ordering Information

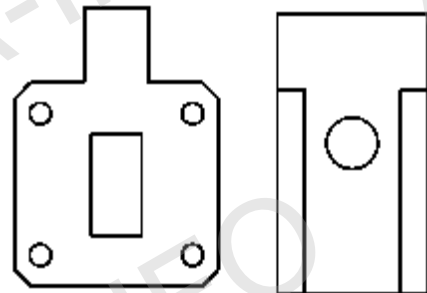
P/N :

* Freq. = Frequency	* BW = Bandwidth
* I.L. = Insertion Loss	* Iso. = Isolation

<u>284</u>	<u>WCIC</u>
WR Size	Product Code

P/N	* Freq. (GHz)	* BW (MHz)	EIA WR	* I.L. (dB)	* Iso. (dB)	VSWR	Average Power (W)	Flange
340WCIC-2326-20-250	2.30-2.60	Full	WR340	0.3	20	1.20	250	FDP26
284WCIC-2731-20-1200	2.70-3.10	Full	WR284	0.4	20	1.30	1200	FDP32
187WCIC-4450-20-600	4.40-5.00	Full	WR187	0.3	20	1.25	600	FDP48
159WCIC-5458-20-200	5.40-5.80	Full	WR159	0.4	20	1.25	200	FDP58
159WCIC-5665-20-20	5.60-6.50	Full	WR159	0.35	20	1.20	200	FDP58
112WCIC-9096-20-300	9.07-9.67	Full	WR112	0.5	20	1.25	300	FBP84
112WCIC-8085-20-100	8.0-8.5	Full	WR112	0.3	20	1.25	100	FBP84
90WCIC-8999-20-10	8.9-9.9	Full	WR90	0.3	20	1.20	10	FBP100
90WCIC-9095-20-200	9.0-9.5	Full	WR90	0.3	20	1.25	200	FBP100
90WCIC-9499-23-200	9.4-9.9	Full	WR90	0.35	23	1.15	200	FBP100
75WCIC-105117-20-10	10.5-11.7	Full	WR75	0.35	20	1.25	10	FBP120
62WCIC-123167-20-100	12.36-16.7	Full	WR62	0.5	20	1.25	100	FBP140
42WCIC-180265-20-50	18.0-26.5	2000	WR42	0.4	20	1.25	50	FBP220
34WCIC-240270-20-50	24.0-27.0	Full	WR34	0.4	20	1.25	50	FBP260

### WG Isolator



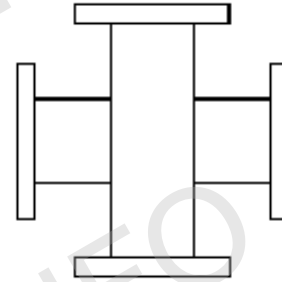
* Freq. = Frequency	* BW = Bandwidth
* I.L. = Insertion Loss	* Iso. = Isolation

Ordering Information  
P/N :

<u>284</u>	<u>WISO</u>
WR Size	Product Code

P/N	* Freq. (GHz)	EIA WR	* BW (MHz)	* I.L. (dB)	* Iso. (dB)	VSWR	Average Power (W)	Flange
284WISO-3134-20-200	3.13-3.47	WR284	Full	0.5	20	1.25	200	FDP32/FDM32
112WISO-7485-20-10	7.4-8.5	WR112	Full	0.5	18	1.3	10	FBP84
112WISO-7579-20-50	7.5-7.9	WR112	Full	0.3	20	1.25	50	FBP84
90WISO-80105-17-10	8.0-10.5	WR90	Full	0.6	15	1.3	10	FBP100
90WISO-8595-18-10	8.5-9.5	WR90	Full	0.6	18	1.3	10	FBP100
90WISO-100103-22-200	10.0-10.3	WR90	Full	0.4	22	1.2	200	FBP100/FBM100/ FBE100
75WISO-125135-22-10	12.5-13.5	WR75	500	0.4	22	1.2	10	FBP120/FBM120/ FBE120
62WISO-130160-20-100	13.0-16.0	WR62	1000	0.4	20	1.2	100	FBP140/FBM140/ FBE140
62WISO-130160-22-30	13.0-16.0	WR62	600	0.3	22	1.2	30	FBP140/FBM140/ FBE140
51WISO-160170-25-100	16.0-17.0	WR51	500	0.5	25	1.18	100	FBP180/FBM180/ FBE180
42WISO-180265-20-10	18.0-26.5	WR42	1000	0.4	20	1.25	10	FBP220/FBM220/ FBE220
42WISO-190240-18-1	19.0-24.0	WR42	Full	0.6	18	1.3	1	FBP220
42WISO-196216-20-15	19.6-21.6	WR42	2000	0.4	20	1.25	15	FBP220
42WISO-210230-20-10	21.0-23.0	WR42	2000	0.5	20	1.25	10	FBP220/FBM220/ FBE220
34WISO-250270-20-10	25.0-27.0	WR34	Full	0.4	20	1.25	10	FBP260/FBM260/ FBE260
28WISO-270330-18-1	27.0-33.0	WR28	Full	0.6	18	1.4	1	FBP320

### WG Coupler - Cross (W+C-XX Type)



* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

#### Order Information

P/N :

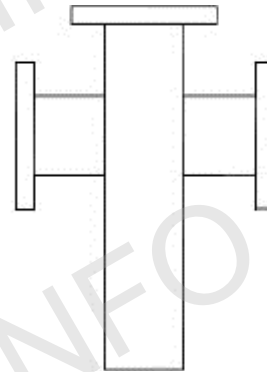
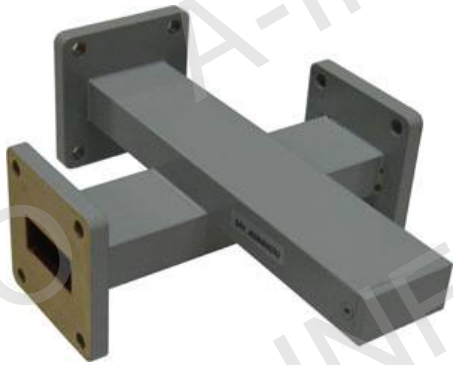
<u>975</u>	<u>W+C</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. Max.	VSWR * S.L. Max.	Flange	* Mat.
WR975	0.75-1.12	975W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP9	Al
WR770	0.96-1.45	770W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP12	Al
WR650	1.12-1.70	650W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP14/ FDM14	Al
WR510	1.45-2.20	510W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP18/ FDM18	Al/ Cu
WR430	1.70-2.60	430W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP22/ FDM22	Al/ Cu
WR340	2.20-3.30	340W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP26/ FDM26	Al/ Cu
WR284	2.60-3.95	284W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112W+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.05	FDP84/ FBM84/ FBE84	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. Max.	VSWR * S.L. Max.	Flange	* Mat.
WR90	8.20-12.4	90W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP100/ FBM100/ FBE100	Cu/ Al
WR75	10.0-15.0	75W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP120/ FBM120/ FBE120	Cu/ Al
WR62	12.4-18.0	62W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP140/ FBM140/ FBE140	Cu/ Al
WR51	15.0-22.0	51W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP180/ FBM180/ FBE180	Cu
WR42	18.0-26.5	42W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP320/ FBM320/ FBE320	Cu



### WG Coupler - Cross (WL+C-XX Type)



* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

#### Order Information

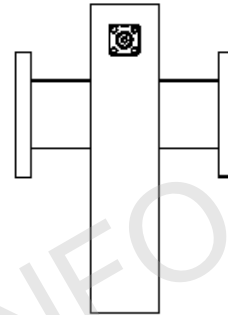
P/N :

<u>975</u>	<u>WL+C</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. Max.	VSWR * S.L. Max.	Flange	* Mat.
WR975	0.75-1.12	975WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP9	Al
WR770	0.96-1.45	770WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP12	Al
WR650	1.12-1.70	650WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP14/ FDM14	Al
WR510	1.45-2.20	510WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP18/ FDM18	Al/ Cu
WR430	1.70-2.60	430WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP22/ FDM22	Al/ Cu
WR340	2.20-3.30	340WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP26/ FDM26	Al/ Cu
WR284	2.60-3.95	284WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP84/ FBM84/ FBE84	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. Max.	VSWR * S.L. Max.	Flange	* Mat.
WR90	8.20-12.4	90WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP100/ FBM100/ FBE100	Cu/ Al
WR75	10.0-15.0	75WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP120/ FBM120/ FBE120	Cu/ Al
WR62	12.4-18.0	62WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP140/ FBM140/ FBE140	Cu/ Al
WR51	15.0-22.0	51WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP180/ FBM180/ FBE180	Cu
WR42	18.0-26.5	42WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP320/ FBM320/ FBE320	Cu

### WG Coupler - Cross (WL+Cx-XX Type)



#### Order Information

P/N :

<b>975</b>	<b>WL+Cx</b>				<b>-XX</b>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Con. = connector
* Mat. = Material	

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR975	0.75-1.12	975WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP9	N-F	Al
WR975	0.75-1.12	975WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP9	S-F	Al
WR770	0.96-1.45	770WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP12	N-F	Al
WR770	0.96-1.45	770WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP12	S-F	Al
WR650	1.12-1.70	650WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP14/ FDM14	N-F	Al
WR650	1.12-1.70	650WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP14/ FDM14	S-F	Al
WR510	1.45-2.20	510WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP18/ FDM18	N-F	Al/ Cu
WR510	1.45-2.20	510WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP18/ FDM18	S-F	Al/ Cu
WR430	1.70-2.60	430WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP22/ FDM22	S-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR340	2.20-3.30	340WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	S-F	Al/ Cu
WR229	3.30-4.90	229WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	S-M	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR90	8.20-12.4	90WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	N-M	Cu/ Al
WR90	8.20-12.4	90WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR90	8.20-12.4	90WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	S-M	Cu/ Al
WR75	10.0-15.0	75WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	N-M	Cu/ Al
WR75	10.0-15.0	75WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR75	10.0-15.0	75WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	S-M	Cu/ Al
WR62	12.4-18.0	62WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WL+CNM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	N-M	Cu/ Al
WR62	12.4-18.0	62WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR62	12.4-18.0	62WL+CSM-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	S-M	Cu/ Al
WR51	15.0-22.0	51WL+CS -XX_Cu	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP180/ FBM180/ FBE180	N-F	Cu
WR51	15.0-22.0	51WL+CSM -XX_Cu	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FBP180/ FBM180/ FBE180	N-M	Cu
WR42	18.0-26.5	42WL+CS -XX_Cu	30/40/50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WL+CSM -XX_Cu	30/40/50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	S-M	Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR42	18.0-26.5	42WL+C3.5 -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WL+C3.5M -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	3.5-M	Cu
WR42	18.0-26.5	42WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR42	18.0-26.5	42WL+CKM -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	2.92-M	Cu
WR34	22.0-33.0	34WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR34	22.0-33.0	34WL+CKM -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP260/ FBM260/ FBE260	2.92-M	Cu
WR28	26.5-40.0	28WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WL+CKM -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.92-M	Cu
WR28	26.5-40.0	28WL+C2.4 -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR28	26.5-40.0	28WL+C2.4M -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.4-M	Cu

### WG Coupler - High Directional (WC-XX Type)



*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Directivity	*Mat. = Material

#### Model Information

Example P/N :

<u>284</u>	<u>WC</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Mat.
WR284	2.60-3.95	284WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP84/ FBM84/ FBE84	Al/ Cu
WR90	8.20-12.4	90WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP100/ FBM100/ FBE100	Al/ Cu
WR75	10.0-15.0	75WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP120/ FBM120/ FBE120	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR62	12.4-18.0	62WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP140/ FBM140/ FBE140	Al/ Cu
WR51	15.0-22.0	51WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP180/ FBM180/ FBE180	Al/ Cu
WR42	18.0-26.5	42WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu
WR12	60.0-90.0	12WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu



### WG Coupler - High Directional (WCHB-XX Type)



*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Directivity	*Mat. = Material

#### Model Information

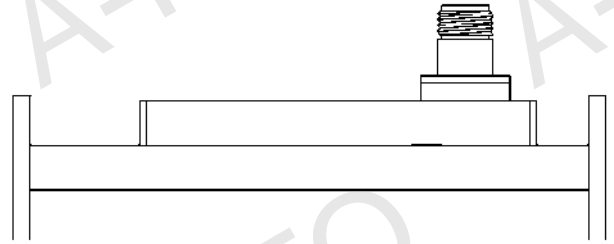
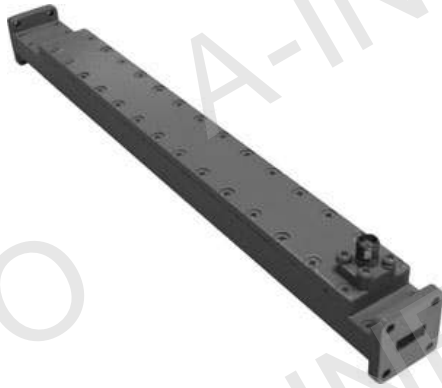
Example P/N :

<u>51</u>	<u>WCHB</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Mat.
WR51	15.0-22.0	51WCHB-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.10	FBP180/ FBM180/ FBE180	Al/ Cu
WR42	18.0-26.5	42WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR12	60.0-90.0	12WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu

### WG Coupler - High Directional (WCx-XX Type)



Order Information  
P/N :

<u>430</u>	<u>WCx</u>				<u>-XX</u>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Con. = Connector
* Mat. = Material	

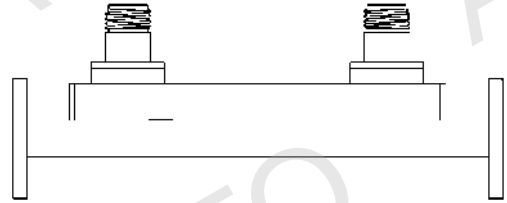
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR229	3.30-4.90	229WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-M	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR112	7.05-10.0	112WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-M	Al/ Cu
WR90	8.20-12.4	90WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR90	8.20-12.4	90WCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-M	Al/ Cu
WR75	10.0-15.0	75WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-M	Al/ Cu
WR75	10.0-15.0	75WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR75	10.0-15.0	75WCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-M	Al/ Cu
WR62	12.4-18.0	62WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-M	Al/ Cu
WR62	12.4-18.0	62WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR62	12.4-18.0	62WCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-M	Al/ Cu
WR51	15.0-22.0	51WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR51	15.0-22.0	51WCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-M	Al/ Cu
WR42	18.0-26.5	42WCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WCSM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-M	Cu
WR42	18.0-26.5	42WC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WC3.5M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-M	Cu
WR42	18.0-26.5	42WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR42	18.0-26.5	42WCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92- M	Cu
WR34	22.0-33.0	34WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR34	22.0-33.0	34WCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92- M	Cu
WR28	26.5-40.0	28WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92- M	Cu
WR28	26.5-40.0	28WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR28	26.5-40.0	28WC2.4M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-M	Cu
WR22	33.0-50.0	22WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP620	1.85-F	Cu

### WG Coupler - High Directional (WUCx-XX Type)



#### Order Information

P/N :

430	WUCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
Directivity: Depending on the Return Loss of coaxial load connected to reverse coupling port.	* Mat. = Material
* Con. = Connector	

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu

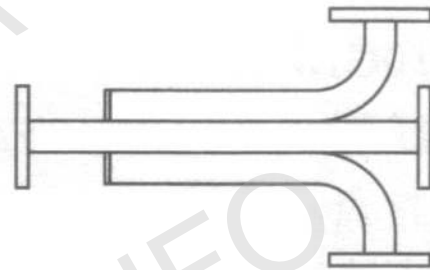
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR284	2.60-3.95	284WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR229	3.30-4.90	229WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	S-M	Al/ Cu



EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR112	7.05-10.0	112WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	N-M	Al/ Cu
WR90	8.20-12.4	90WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR90	8.20-12.4	90WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	S-M	Al/ Cu
WR75	10.0-15.0	75WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	N-M	Al/ Cu
WR75	10.0-15.0	75WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR75	10.0-15.0	75WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	S-M	Al/ Cu
WR62	12.4-18.0	62WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WUCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	N-M	Al/ Cu
WR62	12.4-18.0	62WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR62	12.4-18.0	62WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	S-M	Al/ Cu
WR51	15.0-22.0	51WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR51	15.0-22.0	51WUCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP180/ FBM180/ FBE180	S-M	Al/ Cu
WR42	18.0-26.5	42WUCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WUCSM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	S-M	Cu
WR42	18.0-26.5	42WUC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WUC3.5M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-M	Cu
WR42	18.0-26.5	42WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR42	18.0-26.5	42WUCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	2.92- M	Cu
WR34	22.0-33.0	34WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR34	22.0-33.0	34WUCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP260/ FBM260/ FBE260	2.92- M	Cu
WR28	26.5-40.0	28WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WUCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.92- M	Cu
WR28	26.5-40.0	28WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR28	26.5-40.0	28WUC2.4M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-M	Cu
WR22	33.0-50.0	22WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WUC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WUC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP620	1.85-F	Cu

### WG Coupler - High Directional (WDC-XX Type)



* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

#### Model Information

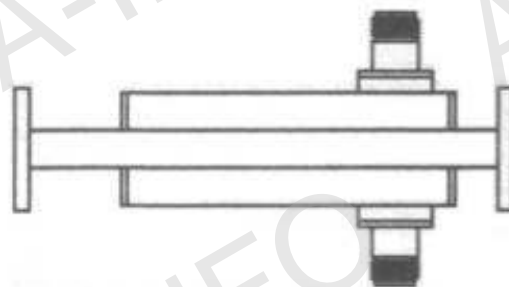
Example P/N :

<u>284</u>	<u>WDC</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR284	2.60-3.95	284WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP84/ FBM84/ FBE84	Al/ Cu
WR90	8.20-12.4	90WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP100/ FBM100/ FBE100	Al/ Cu
WR75	10.0-15.0	75WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP120/ FBM120/ FBE120	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR62	12.4-18.0	62WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP140/ FBM140/ FBE140	Al/ Cu
WR51	15.0-22.0	51WDC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP180/ FBM180/ FBE180	Al/ Cu
WR42	18.0-26.5	42WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu
WR12	60.0-90.0	12WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WDC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu

### WG Coupler - High Directional (WDCx-XX Type)



#### Order Information

P/N :

<u>284</u>	<u>WDCx</u>				<u>-XX</u>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material
* Con. = Connector	

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR284	2.60-3.95	284WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR229	3.30-4.90	229WDCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-M	Al/ Cu

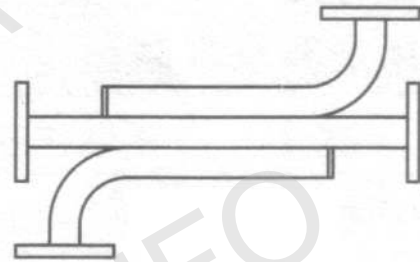
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR187	3.95-5.85	187WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WDCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WDCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WDCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WDCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-M	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR90	8.20-12.4	90WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-M	Al/ Cu
WR90	8.20-12.4	90WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR90	8.20-12.4	90WDSCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-M	Al/ Cu
WR75	10.0-15.0	75WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-M	Al/ Cu
WR75	10.0-15.0	75WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR75	10.0-15.0	75WDSCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-M	Al/ Cu
WR62	12.4-18.0	62WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WDCNM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-M	Al/ Cu
WR62	12.4-18.0	62WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR62	12.4-18.0	62WDSCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-M	Al/ Cu
WR51	15.0-22.0	51WDSCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Al/ Cu
WR51	15.0-22.0	51WDSCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-M	Al/ Cu
WR42	18.0-26.5	42WDSCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDSCSM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	S-M	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR42	18.0-26.5	42WDC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDC3.5M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	3.5-M	Cu
WR42	18.0-26.5	42WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR42	18.0-26.5	42WDCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	2.92-M	Cu
WR34	22.0-33.0	34WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.25	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR34	22.0-33.0	34WDCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.25	FBP260/ FBM260/ FBE260	2.92-M	Cu
WR28	26.5-40.0	28WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDCKM-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.92-M	Cu
WR28	26.5-40.0	28WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR28	26.5-40.0	28WDC2.4M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.4-M	Cu
WR22	33.0-50.0	22WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WDC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WDC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP620	1.85-F	Cu



### WG Coupler - High Directional (WDXC-XX Type)



* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

Model Information

Example P/N :

<u>284</u>	<u>WDXC</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR284	2.60-3.95	284WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP84/ FBM84/ FBE84	Al/ Cu
WR90	8.20-12.4	90WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP100/ FBM100/ FBE100	Al/ Cu
WR75	10.0-15.0	75WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP120/ FBM120/ FBE120	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR62	12.4-18.0	62WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP140/ FBM140/ FBE140	Al/ Cu
WR51	15.0-22.0	51WDXC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP180/ FBM180/ FBE180	Al/ Cu
WR42	18.0-26.5	42WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu
WR12	60.0-90.0	12WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WDXC- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu

### WG Coupler - High Directional (WDXCHB-XX Type)



* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

#### Model Information

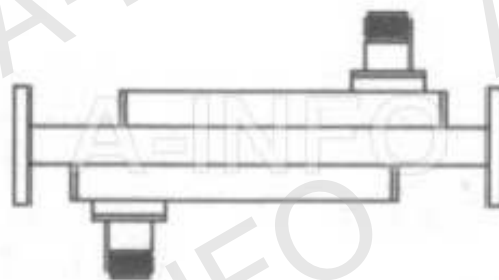
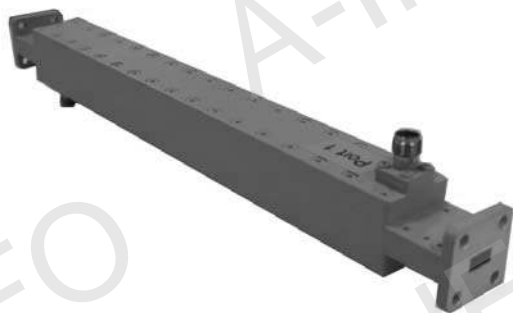
Example P/N :

<u>51</u>	<u>WDXCHB</u>	<u>-XX</u>
WR Size	Product Code	Coupling

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR51	15.0-22.0	51WDXCHB-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.10	FBP180/ FBM180/ FBE180	Al/ Cu
WR42	18.0-26.5	42WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WDXCHB-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Mat.
WR12	60.0-90.0	12WDXCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WDXCHB- XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu

### WG Coupler - High Directional (WDXCx-XX Type)



#### Order Information

P/N :

<u>430</u>	<u>WDXCx</u>				<u>-XX</u>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR229	3.30-4.90	229WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-M	Al/ Cu

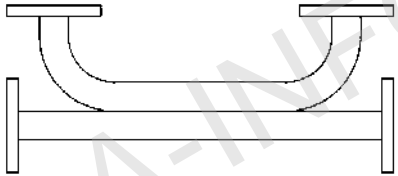
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR112	7.05-10.0	112WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-M	Al/ Cu
WR90	8.20-12.4	90WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR90	8.20-12.4	90WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-M	Al/ Cu
WR75	10.0-15.0	75WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-M	Al/ Cu
WR75	10.0-15.0	75WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR75	10.0-15.0	75WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-M	Al/ Cu
WR62	12.4-18.0	62WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WDXCNM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-M	Al/ Cu
WR62	12.4-18.0	62WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR62	12.4-18.0	62WDXCSM- XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-M	Al/ Cu
WR51	15.0-22.0	51WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR51	15.0-22.0	51WDXCSM-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-M	Al/ Cu
WR42	18.0-26.5	42WDXCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDXCSM- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-M	Cu
WR42	18.0-26.5	42WDXC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDXC3.5M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-M	Cu
WR42	18.0-26.5	42WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR42	18.0-26.5	42WDXCKM- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92- M	Cu
WR34	22.0-33.0	34WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR34	22.0-33.0	34WDXCKM- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92- M	Cu
WR28	26.5-40.0	28WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDXCKM- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92- M	Cu
WR28	26.5-40.0	28WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR28	26.5-40.0	28WDXC2.4M- XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-M	Cu
WR22	33.0-50.0	22WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WDXC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WDXC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP620	1.85-F	Cu

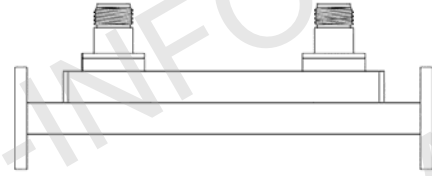


We can also provide the following types coupler, pls. see the outline drawing.

### *Four ports Dual Coupler*

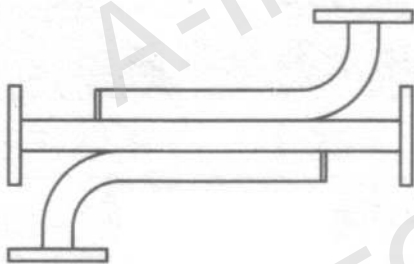


WUC Series

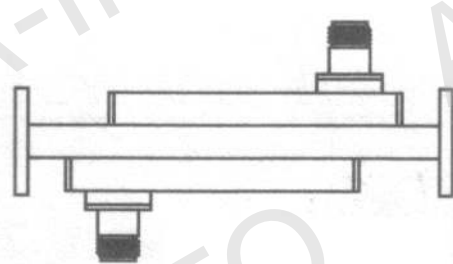


WUCN Series

### *Dual Directional Coupler*

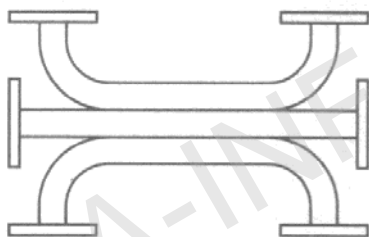


WDXC Series

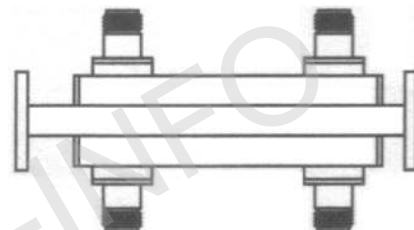


WDXCN Series

### *Six Ports Dual Coupler*

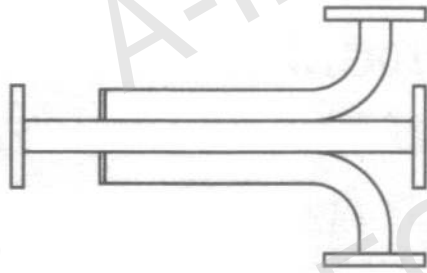


WDUC Series

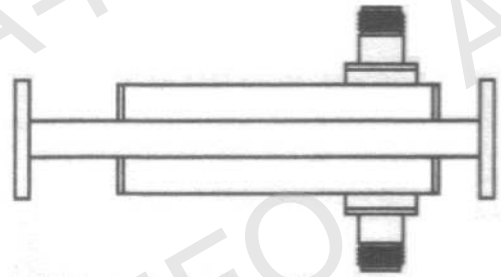


WDUCN Series

*Same Directional Coupled Power Divider*



WDC Series

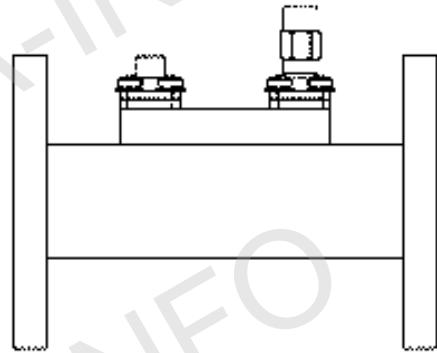


WDCN Series

Note:

For detailed information of above couplers, pls.feel free to contact us.

### WG Coupler - Loop (WHCx-XX Type)



#### Order Information

P/N :

430	WHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* BW. = Bandwidth	* M.L. = Mainline
* S.L. = Secondline	* Mat. = Material
* Dir. = Directivity	* Con. = Connector

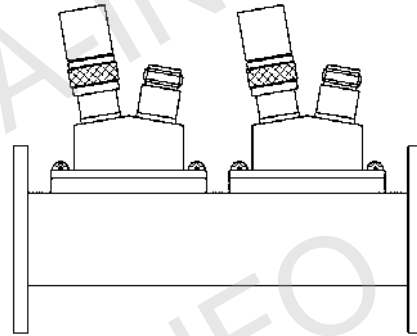
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WHCNM- XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-M	Cu/ Al

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR90	8.20-12.4	90WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR90	8.20-12.4	90WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-M	Cu/ Al
WR75	10.0-15.0	75WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-M	Cu/ Al
WR75	10.0-15.0	75WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR75	10.0-15.0	75WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-M	Cu/ Al
WR62	12.4-18.0	62WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-M	Cu/ Al
WR62	12.4-18.0	62WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR62	12.4-18.0	62WHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-M	Cu/ Al
WR51	15.0-22.0	51WHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR34	22.0-33.0	34WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

### WG Coupler - Loop (WHHCx-XX Type)



#### Order Information

P/N :

430	WHHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* BW. = Bandwidth	* M.L. = Mainline
* S.L. = Secondline	* Mat. = Material
* Dir. = Directivity	* Con. = Connector

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WHHCNM- XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu

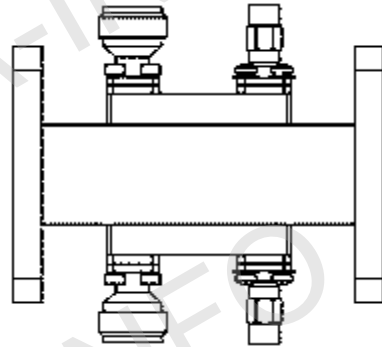
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WHHCMSM-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WHHCMSM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WHHCMSM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WHHCMSM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WHHCMSM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-M	Cu/ Al



EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR90	8.20-12.4	90WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR90	8.20-12.4	90WHHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-M	Cu/ Al
WR75	10.0-15.0	75WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-M	Cu/ Al
WR75	10.0-15.0	75WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR75	10.0-15.0	75WHHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-M	Cu/ Al
WR62	12.4-18.0	62WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WHHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-M	Cu/ Al
WR62	12.4-18.0	62WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR62	12.4-18.0	62WHHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-M	Cu/ Al
WR51	15.0-22.0	51WHHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WHHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WHHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR34	22.0-33.0	34WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WHHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

### WG Coupler - Loop (WDHCx-XX Type)



#### Order Information

P/N :

430	WDHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* BW. = Bandwidth	* M.L. = Mainline
* S.L. = Secondline	* Mat. = Material
* Dir. = Directivity	* Con. = Connector

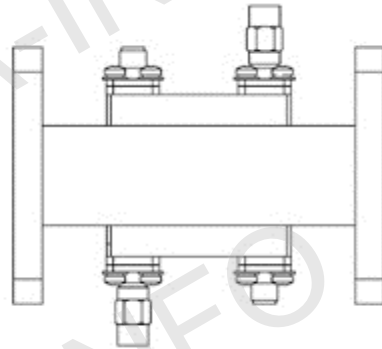
EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDHCNM- XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-M	Cu/ Al

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR90	8.20-12.4	90WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR90	8.20-12.4	90WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-M	Cu/ Al
WR75	10.0-15.0	75WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-M	Cu/ Al
WR75	10.0-15.0	75WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR75	10.0-15.0	75WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-M	Cu/ Al
WR62	12.4-18.0	62WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WDHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-M	Cu/ Al
WR62	12.4-18.0	62WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR62	12.4-18.0	62WDHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-M	Cu/ Al
WR51	15.0-22.0	51WDHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WDHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR34	22.0-33.0	34WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

### WG Coupler - Loop (WDXHCx-XX Type)



#### Order Information

P/N :

430	WDXHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* BW. = Bandwidth	* M.L. = Mainline
* S.L. = Secondline	* Mat. = Material
* Dir. = Directivity	* Con. = Connector

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR430	1.70-2.60	430WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDXHCNM- XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-M	Al/ Cu
WR229	3.30-4.90	229WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR229	3.30-4.90	229WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-M	Al/ Cu
WR187	3.95-5.85	187WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-M	Al/ Cu
WR187	3.95-5.85	187WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR187	3.95-5.85	187WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-M	Al/ Cu
WR159	4.90-7.05	159WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-M	Al/ Cu
WR159	4.90-7.05	159WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR159	4.90-7.05	159WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-M	Al/ Cu
WR137	5.85-8.20	137WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-M	Al/ Cu
WR137	5.85-8.20	137WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR137	5.85-8.20	137WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-M	Al/ Cu
WR112	7.05-10.0	112WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-M	Al/ Cu
WR112	7.05-10.0	112WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR112	7.05-10.0	112WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-M	Al/ Cu
WR90	8.20-12.4	90WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-M	Cu/ Al



EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR90	8.20-12.4	90WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR90	8.20-12.4	90WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-M	Cu/ Al
WR75	10.0-15.0	75WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-M	Cu/ Al
WR75	10.0-15.0	75WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR75	10.0-15.0	75WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-M	Cu/ Al
WR62	12.4-18.0	62WDXHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WDXHCNM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-M	Cu/ Al
WR62	12.4-18.0	62WDXHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR62	12.4-18.0	62WDXHCSM-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-M	Cu/ Al
WR51	15.0-22.0	51WDXHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WDXHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDXHC3.5- XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDXHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	* Freq. (GHz)	P/N	* Coup. (dB)	* Dir. (dB) (Typ.)	VSWR * M.L. * S.L. Max.	Flange	* Con.	* Mat.
WR34	22.0-33.0	34WDXHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WDXHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDXHC2.4- XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

### DR WG Coupler - High Directional (DRWCx-XX Type)



#### Order Information

P/N :

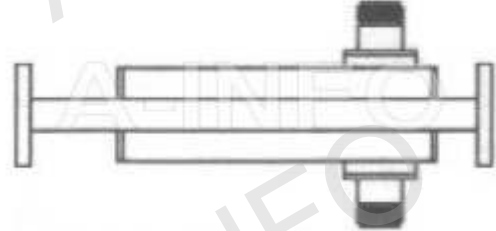
200	DRWCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material
* Con. = Connector	

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD200	2.0-4.8	200DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD350	3.5-8.2	350DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD475	4.75-11.0	475DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu

### DR WG Coupler - High Directional (DRWDCx-XX Type)



#### Order Information

P/N :

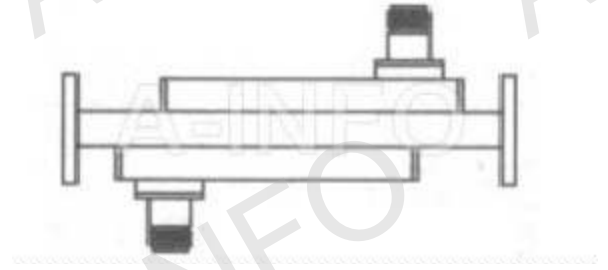
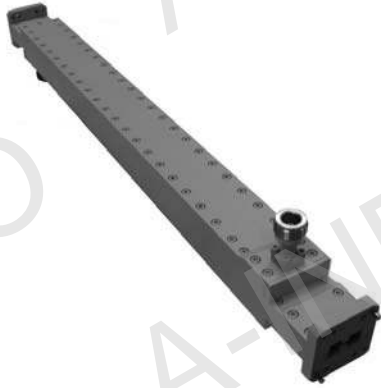
<u>200</u>	<u>DRWDCx</u>				<u>-XX</u>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material
* Con. = Connector	

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD200	2.0-4.8	200DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD350	3.5-8.2	350DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD475	4.75-11.0	475DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWDCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWDCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu

### DR WG Coupler - High Directional (DRWDXCx-XX Type)



#### Order Information

P/N :

<u>200</u>	<u>DRWDXCx</u>				<u>-XX</u>
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
Notes: F = Female, M = Male.					

* Freq. = Frequency	* Coup. = Coupling
* Coup. Acc. = Coupling Accuracy	* Freq. SS. = Frequency Sensitivity
* M.L. = Mainline	* S.L. = Secondline
* Dir. = Directivity	* Mat. = Material
* Con. = Connector	

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD200	2.0-4.8	200DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu

EIA WRD	* Freq. (GHz)	P/N	* Coup. (dB)	* Coup. Acc. (dB)	* Freq. SS. (dB)	* Dir. (dB) Min.	VSWR * M.L. * S.L. Max.	* Con.	* Mat.
WRD350	3.5-8.2	350DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD475	4.75-11.0	475DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWDXCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWDXCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu



### WG Detector



#### Ordering Information

P/N :

<u>284</u>	<u>JBQ</u>
WR Size	Product Code

P/N	Frequency (GHz)	Sensitivity (mV/mW)	EIA WR	Anti-Burning Power (mW)	Detector Type	Response Speed	Connector
284JBQ-P	2.60-3.95	300	WR284	25-100	Positive	2us	SMA/ BNC
284JBQ-N					Negative		
229JBQ-P	3.30-4.90	300	WR229	25-100	Positive	2us	SMA/ BNC
229JBQ-N					Negative		
187JBQ-P	3.95-5.85	300	WR187	25-100	Positive	2us	SMA/ BNC
187JBQ-N					Negative		
159JBQ-P	4.90-7.05	300	WR159	25-100	Positive	2us	SMA/ BNC
159JBQ-N					Negative		
137JBQ-P	5.85-8.20	300	WR137	25-100	Positive	2us	SMA/ BNC
137JBQ-N					Negative		
112JBQ-P	7.05-10.0	300	WR112	25-100	Positive	2us	SMA/ BNC
112JBQ-N					Negative		
90JBQ-P	8.2-12.4	200	WR90	25-100	Positive	2us	SMA/ BNC
90JBQ-N					Negative		
75JBQ-P	10.0-15.0	200	WR75	25-100	Positive	2us	SMA/ BNC
75JBQ-N					Negative		
62JBQ-P	12.4-18.0	200	WR62	25-100	Positive	2us	SMA/ BNC
62JBQ-N					Negative		
51JBQ-P_Cu	15.0-22.0	200	WR51	25-100	Positive	2us	SMA/ BNC
51JBQ-N_Cu					Negative		
42JBQ-P_Cu	18.0-26.5	200-400	WR42	25-100	Positive	2us	SMA
42JBQ-N_Cu					Negative		
34JBQ-P_Cu	22.0-33.0	400-600	WR34	25-100	Positive	2us	SMA
34JBQ-N_Cu					Negative		
28JBQ-P_Cu	26.5-40.0	400-600	WR28	25-100	Positive	2us	SMA
28JBQ-N_Cu					Negative		
22JBQ-P_Cu	33.0-50.0	200	WR22	25-100	Positive	2us	SMA
22JBQ-N_Cu					Negative		
19JBQ-P_Cu	40.0-60.0	200	WR19	25-100	Positive	2us	SMA
19JBQ-N_Cu					Negative		
15JBQ-P_Cu	50.0-75.0	50-70	WR15	25-100	Positive	2us	SMA
15JBQ-N_Cu					Negative		
12JBQ-P_Cu	60.0-90.0	50-70	WR12	25-100	Positive	2us	SMA
12JBQ-N_Cu					Negative		
10JBQ-P_Cu	75.0-110.0	50-70	WR10	25-100	Positive	2us	SMA
10JBQ-N_Cu					Negative		

### WG Filter – Band Pass



#### Ordering Information

P/N :

<u>75</u>	<u>-LB</u>	<u>-BP</u>	<u>-10565-10765</u>
WR Size	Product Code	Band Pass	Bandwidth(MHz)

* Rej. = Rejection	* I.L. = Insertion Loss
* Mat. = Material	

EIA WR	Passband (GHz)	P/N	Stopband (GHz)	* Rej. (dB) Min.	* I.L. (dB)	VSWR	Flange	* Mat.
WR229	3.82-3.86	229LB-BP-3820-3860	3.79&3.89	35	1.5	1.5	FDP40	Al
WR90	9.00-9.50	90LB-BP-9000-9500	8.50&10.0	45	0.6	1.3	FBP100	Al
WR90	9.15-9.65	90LB-BP-9150-9650	8.65&10.15	40	0.6	1.3	FBP100	Al
WR75	10.09-10.68	75LB-BP-10090-10680	9.6&11.7-12.3	80	1.2	1.5	FBP120	Al
WR75	10.565-10.765	75LB-BP-10565-10765	12.8&9.6	80	1.2	1.5	FBP120	Al
WR62	12.40-18.00	62LB-BP-12400-18000	11.16	45	1.0	1.8	FBP140	Al
			24.8-45	40				
WR42	25.50-27.00	42LB-BP-25500-27000	23.5&29.0	30	0.5	1.2	FBP220	Al
			21.5&31.0	60				
WR28	28.60-29.80	28LB-BP-28600-29800	26.95&31.45	70	0.99	1.5	FBP320	Al
WR28	29.50-30.00	28LB-BP-29500-30000	28.55	50	1.2	1.2	FBP320	Al
WR28	34.00-36.00	28LB-BP-34000-36000	32.4445&38.5-40.0	60	0.5	2.0	FBP320	Cu

### WG Filter – Low Pass



#### Ordering Information

P/N :

<u>284</u>	<u>-LB</u>	<u>-LP</u>	<u>-2600-3950</u>
WR Size	Product Code	Low Pass	Bandwidth(MHz)

*Rej. = Rejection	*I.L. = Insertion Loss
*Mat. = Material	

EIA WR	Passband (GHz)	P/N	Stopband (GHz)	*Rej. (dB) Min.	*I.L. (dB)	VSWR	Flange	*Mat.
WR284	2.60 - 3.95	284LB-LP-2600-3950	5.20 - 9.89	40	0.5	1.5	FDP32	Al
WR229	3.30 - 4.90	229LB-LP-3300-4900	6.60 - 12.25	40	0.5	1.5	FDP40	Al
WR187	3.95 - 5.85	187LB-LP-3950-5850	7.90 - 14.63	40	0.5	1.5	FDP48	Al
WR159	4.90 - 7.05	159LB-LP-4900-7050	9.80 - 17.63	40	0.5	1.5	FDP58	Al
WR137	5.85 - 8.20	137LB-LP-5850-8200	11.70 - 20.50	40	0.5	1.5	FDP70	Al
WR112	7.05 - 10.00	112LB-LP-7050-1000	14.10 - 25.00	40	0.5	1.5	FBP84	Al
WR90	8.20 - 12.40	90LB-LP-8200-12400	16.40 - 31.00	40	0.5	1.5	FBP100	Al
WR75	10.00 - 12.50	75LB-LP-10000-12500	14.00 - 25.00	30	0.4	1.4	FBP120	Al
WR75	10.00 - 15.00	75LB-LP-10000-15000	20.00 - 37.50	40	0.5	1.5	FBP120	Al
WR62	12.40 - 18.00	62LB-LP-12400-18000	24.80 - 45.00	40	0.8	1.5	FBP140	Al
WR51	15.00 - 22.00	51LB-LP-15000-22000	30.00 - 55.00	40	0.8	1.5	FBP180	Cu
WR42	18.00 - 26.50	42LB-LP-18000-26500	36.00 - 66.25	40	1.0	1.5	FBP220	Cu
WR34	22.00 - 33.00	34LB-LP-22000-33000	44.00 - 82.50	40	1.0	1.5	FBP260	Cu
WR28	26.50 - 40.00	28LB-LP-26500-40000	53.00 - 100.00	40	1.0	1.5	FBP320	Cu

### WG Filter – High Pass



#### Ordering Information

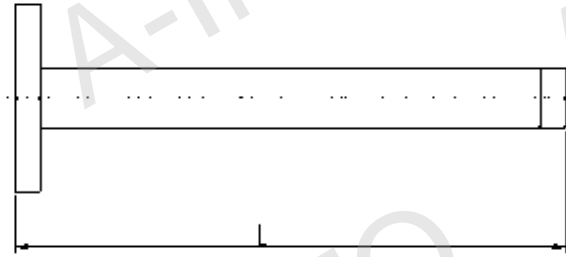
P/N :

<u>284</u>	<u>-LB</u>	<u>-HP</u>	<u>-2600-3950</u>
WR Size	Product Code	High Pass	Bandwidth(MHz)

* Rej.= Rejection	* I.L. = Insertion Loss
* Mat. = Material	

EIA WR	Passband (GHz)	P/N	90% Cutoff Frequency (GHz)	* Rej. (dB) Min.	* I.L. (dB)	VSWR	Flange	* Mat.
WR284	2.60 - 3.95	284LB-HP-2600-3950	2.34	50.00	0.5	1.5	FDP32	Al
WR229	3.30 - 4.90	229LB-HP-3300-4900	2.97	50.00	0.5	1.5	FDP40	Al
WR187	3.95 - 5.85	187LB-HP-3950-5850	3.56	50.00	0.5	1.5	FDP48	Al
WR159	4.90 - 7.05	159LB-HP-4900-7050	4.41	50.00	0.5	1.5	FDP58	Al
WR137	5.85 - 8.20	137LB-HP-5850-8200	5.27	50.00	0.5	1.5	FDP70	Al
WR112	7.05 - 10.00	112LB-HP-7050-1000	6.35	50.00	0.5	1.5	FBP84	Al
WR90	8.20 - 12.40	90LB-HP-8200-12400	7.38	45.00	0.5	1.5	FBP100	Al
WR75	10.00 - 15.00	75LB-HP-10000-15000	9.00	45.00	0.5	1.5	FBP120	Al
WR62	12.40 - 18.00	62LB-HP-12400-18000	11.16	45.00	0.8	1.5	FBP140	Al
WR51	15.00 - 22.00	51LB-HP-15000-22000	13.50	45.00	0.8	1.5	FBP180	Cu
WR42	18.00 - 26.50	42LB-HP-18000-26500	16.20	45.00	1.0	1.5	FBP220	Cu
WR34	22.00 - 33.00	34LB-HP-22000-33000	19.80	45.00	1.0	1.5	FBP260	Cu
WR28	26.50 - 40.00	28LB-HP-26500-40000	23.85	45.00	1.0	1.5	FBP320	Cu

### WG Load - Precision & Low Power



Ordering Information, P/N:

* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

975	WLPL
975	WPL
WR Size	Product Code

#### 1. General Version

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	* Mat.
WR975	0.75-1.12	975WLPL	1.10	25	25	900.5 / 35.4	FDP9	Al
WR770	0.96-1.45	770WLPL	1.10	25	25	-	FDP12	Al
WR650	1.12-1.70	650WLPL	1.08	25	25	495 / 19.5	FDP14	Al
WR510	1.45-2.20	510WLPL	1.06	25	25	435 / 17.1	FDP18	Al
WR430	1.70-2.60	430WLPL	1.05	15	15	376 / 14.8	FDP22/ APF430	Al
WR340	2.20-3.30	340WLPL	1.05	12	12	320 / 12.6	FDP26/ APF340	Al
WR284	2.60-3.95	284WLPL	1.05	10	10	264 / 10.4	FDP32/ FAP32/ FEP32/ APF284B/A PF284/ APF284C	Al
WR229	3.30-4.90	229WLPL	1.05	10	10	188 / 7.4	FDP40/ FAP40/ FEP40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WLPL	1.04	8	8	163 / 6.4	FDP48/ FAP48/ FEP48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WLPL	1.04	7	7	147 / 5.8	FDP58/ FAP58/ FEP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WLPL	1.04	6	6	132 / 5.2	FDP70/ FAP70/ FEP70/ APF137/ APF137C	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	* Mat.
WR112	7.05-10.0	112WLPL	1.03	4	4	127 / 5	FBP84/ FDP84/ FEP84/ APF112B/ APF112	Al
WR90	8.20-12.4	90WLPL	1.03	4	4	127 / 5	FBP100/ FDP100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR75	10.0-15.0	75WLPL	1.04	2	2	127 / 5	FBP120/ FDP120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WLPL	1.04	1.5	1.5	102 / 4	FBP140/ FDP140/ APF62	Al
WR51	15.0-22.0	51WLPL_Cu	1.05	1	1	79 / 3.1	FBP180/ FDP180/ APF51C/ APF51B/ APF51A	Cu
WR42	18.0-26.5	42WLPL_Cu	1.05	0.5	0.5	71 / 2.8	FBP220/ APF42	Cu
WR34	22.0-33.0	34WLPL_Cu	1.05	0.5	0.5	63.5 / 2.5	FBP260/ APF34	Cu
WR28	26.5-40.0	28WLPL_Cu	1.05	0.5	0.5	56 / 2.2	FBP320/ APF28	Cu
WR22	33.0-50.0	22WLPL_Cu	1.08	0.5	0.5	41 / 1.6	FUGP400/ APF22/ APF22A	Cu
WR19	40.0-60.0	19WLPL_Cu	1.06	0.3	0.3	41 / 1.6	FUGP500/ APF19/ APF19A	Cu
WR15	50.0-75.0	15WLPL_Cu	1.10	0.3	0.1	38 / 1.5	FUGP620/ APF15/ APF15A	Cu
WR12	60.0-90.0	12WLPL_Cu	1.06	0.2	0.03	38 / 1.5	FUGP740/ APF12/ APF12A	Cu
WR10	75.0-110.0	10WLPL_Cu	1.08	0.2	0.03	38 / 1.5	FUGP900/ APF10/ APF10A	Cu

### 2. Precision Version

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	* Mat.
WR975	0.75-1.12	975WPL	1.05	25	25	900.5 / 35.4	FDP9	Al
WR770	0.96-1.45	770WPL	1.05	25	25	-	FDP12	Al
WR650	1.12-1.70	650WPL	1.04	25	25	495 / 19.5	FDP14	Al
WR510	1.45-2.20	510WPL	1.03	25	25	435 / 17.1	FDP18	Al
WR430	1.70-2.60	430WPL	1.025	15	15	376 / 14.8	FDP22/ APF430	Al
WR340	2.20-3.30	340WPL	1.025	12	12	320 / 12.6	FDP26/ APF340	Al
WR284	2.60-3.95	284WPL	1.025	10	10	264 / 10.4	FDP32/ FAP32/ FEP32/ APF284B/ APF284/ APF284C	Al
WR229	3.30-4.90	229WPL	1.02	10	10	188 / 7.4	FDP40/ FAP40/ FEP40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WPL	1.02	8	8	163 / 6.4	FDP48/ FAP48/ FEP48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WPL	1.02	7	7	147 / 5.8	FDP58/ FAP58/ FEP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WPL	1.02	6	6	132 / 5.2	FDP70/ FAP70/ FEP70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WPL	1.015	4	4	127 / 5	FBP84/ FDP84/ FEP84/ APF112B/ APF112	Al
WR90	8.20-12.4	90WPL	1.015	4	4	127 / 5	FBP100/ FDP100/ FEP100/ APF90B/ APF90/ APF90A	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	* Mat.
WR75	10.0-15.0	75WPL	1.02	2	2	127 / 5	FBP120/ FDP120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WPL	1.02	1.5	1.5	102 / 4	FBP140/ FDP140/ APF62	Al
WR51	15.0-22.0	51WPL_Cu	1.025	1	1	79 / 3.1	FBP180/ FDP180/ APF51C/ APF51B/ APF51A	Cu
WR42	18.0-26.5	42WPL_Cu	1.025	0.5	0.5	71 / 2.8	FBP220/ APF42	Cu
WR34	22.0-33.0	34WPL_Cu	1.025	0.5	0.5	63.5 / 2.5	FBP260/ APF34	Cu
WR28	26.5-40.0	28WPL_Cu_P0	1.025	0.5	0.5	56 / 2.2	APF28	Cu
WR22	33.0-50.0	22WPL_Cu_P0	1.04	0.5	0.5	41 / 1.6	APF22/ APF22A	Cu
WR19	40.0-60.0	19WPL_Cu_P0	1.03	0.3	0.3	41 / 1.6	APF19/ APF19A	Cu
WR15	50.0-75.0	15WPL_Cu_P0	1.04	0.3	0.1	38 / 1.5	APF15/ APF15A	Cu
WR12	60.0-90.0	12WPL_Cu_P0	1.05	0.2	0.03	38 / 1.5	APF12/ APF12A	Cu
WR10	75.0-110.0	10WPL_Cu	1.03	0.2	0.0	38 / 1.5	FUGP900/ APF10/ APF10A	Cu



### WG Load - Sliding



* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

#### Ordering Information

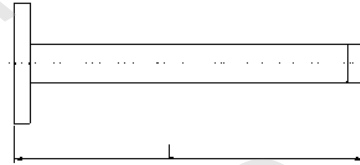
P/N :

<u>650</u>	<u>WSL</u>
WR Size	Product Code

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Flange Type	* Mat.
WR650	1.12-1.70	650WSL	1.04	25	25	FDP14	Al
WR510	1.45-2.20	510WSL	1.03	25	25	FDP18	Al
WR430	1.70-2.60	430WSL	1.025	15	15	FDP22/APF430	Al
WR340	2.20-3.30	340WSL	1.025	12	12	FDP26/APF340	Al
WR284	2.60-3.95	284WSL	1.025	10	10	FDP32/FAP32/FEP32/ APF284B/APF284/ APF284C	Al
WR229	3.30-4.90	229WSL	1.02	10	10	FDP40/FAP40/FEP40/ APF229/APF229B	Al
WR187	3.95-5.85	187WSL	1.02	8	8	FDP48/FAP48/FEP48/ APF187/APF187C	Al
WR159	4.90-7.05	159WSL	1.02	7	7	FDP58/FAP58/FEP58/ APF159/APF159B	Al
WR137	5.85-8.20	137WSL	1.02	6	6	FDP70/FAP70/FEP70/ APF137/APF137C	Al
WR112	7.05-10.0	112WSL	1.015	4	4	FBP84/FDP84/FEP84/ APF112B/APF112	Al
WR90	8.20-12.4	90WSL	1.015	4	4	FBP100/FDP100/ FEP100/APF90B/ APF90/APF90A	Al
WR75	10.0-15.0	75WSL	1.02	2	2	FBP120/FDP120/ APF75B/APF75A	Al
WR62	12.4-18.0	62WSL	1.02	1.5	1.5	FBP140/FDP140/ APF62	Al
WR51	15.0-22.0	51WSL_Cu	1.025	1	1	FBP180/FDP180/ APF51C/APF51B/ APF51A	Cu
WR42	18.0-26.5	42WSL_Cu	1.025	0.5	0.5	FBP220/APF42	Cu
WR34	22.0-33.0	34WSL_Cu	1.025	0.5	0.5	FBP260/APF34	Cu
WR28	26.5-40.0	28WSL_Cu	1.025	0.5	0.5	FBP320/APF28	Cu
WR22	33.0-50.0	22WSL_Cu	1.03	0.5	0.5	FUGP400/APF22/ APF22A	Cu
WR19	40.0-60.0	19WSL_Cu	1.04	0.3	0.3	FUGP500/APF19/ APF19A	Cu

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Flange Type	* Mat.
WR15	50.0-75.0	15WSL_Cu	1.05	0.3	0.1	FUGP620/APF15/APF15A	Cu
WR12	60.0-90.0	12WSL_Cu	1.06	0.2	0.03	FUGP740/APF12/APF12A	Cu
WR10	75.0-110.0	10WSL_Cu	1.06	0.2	0.03	FUGP900/APF10/APF10A	Cu

### WG Load - Low-Medium Power



* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

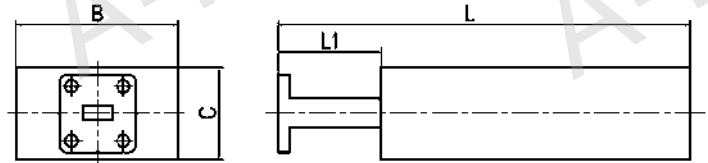
#### Ordering Information

P/N :

<u>650</u>	<u>WMPL</u>	<u>80</u>
WR Size	Product Code	Average Power

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	* Mat.
WR650	1.12-1.70	650WMPL80	1.2	80	400	495 / 19.5	FDP14/FDM14	Al
WR510	1.45-2.20	510WMPL70	1.2	70	400	435 / 17.1	FDP18/FDM18	Al
WR430	1.70-2.60	430WMPL60	1.15	60	400	376 / 14.8	FDP22/FDM22	Al
WR340	2.20-3.30	340WMPL60	1.15	60	400	320 / 12.6	FDP26/FDM26	Al
WR284	2.60-3.95	284WMPL45	1.1	45	400	264 / 10.4	FDP32/FDM32	Al
WR229	3.30-4.90	229WMPL40	1.1	40	400	188 / 7.4	FDP40/FDM40	Al
WR187	3.95-5.85	187WMPL40	1.1	40	350	163 / 6.4	FDP48/FDM48	Al
WR159	4.90-7.05	159WMPL30	1.1	30	300	147 / 5.8	FDP58/FDM58	Al
WR137	5.85-8.20	137WMPL25	1.1	25	200	132 / 5.2	FDP70/FDM70	Al
WR112	7.05-10.0	112WMPL25	1.1	25	200	127 / 5	FBP84/FBM84	Al
WR90	8.20-12.4	90WMPL25	1.1	25	110	123 / 4.84	FBP100/FBM100	Al
WR90	8.20-12.4	90WMPL50	1.1	50	110	121 / 4.76	FBP100/FBM100	Al
WR75	10.0-15.0	75WMPL25	1.1	25	100	120 / 4.72	FBP120/FBM120	Al
WR62	12.4-18.0	62WMPL15	1.1	15	100	129 / 5	FBP140/FBM140	Al
WR51	15.0-22.0	51WMPL15_Cu	1.1	15	60	79 / 3.1	FBP180/FBM180	Cu
WR42	18.0-26.5	42WMPL15_Cu	1.1	15	60	71 / 2.8	FBP220/FBM220	Cu
WR34	22.0-33.0	34WMPL10_Cu	1.1	10	40	63.5 / 2.5	FBP260/FBM260	Cu
WR28	26.5-40.0	28WMPL10_Cu	1.1	10	25	74 / 2.9	FBP320/FBM320	Cu
WR22	33.0-50.0	22WMPL5_Cu	1.15	5	10	41 / 1.6	FUGP400	Cu
WR19	40.0-60.0	19WMPL3_Cu	1.15	3	6	41 / 1.6	FUGP500	Cu
WR15	50.0-75.0	15WMPL3_Cu	1.2	3	6	38 / 1.5	FUGP620	Cu
WR12	60.0-90.0	12WMPL2_Cu	1.2	2	4	38 / 1.5	FUGP740	Cu
WR10	75.0-110.0	10WMPL2_Cu	1.2	2	4	38 / 1.5	FUGP900	Cu

### WG Load - Medium Power



* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

#### Ordering Information

P/N :

650	WMPL	1500
WR Size	Product Code	Average Power

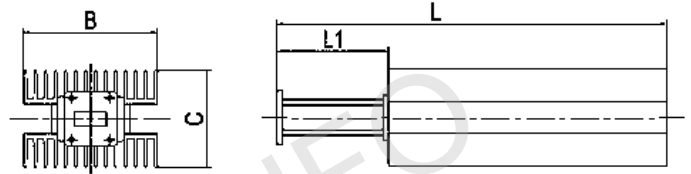
EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR650	1.12-1.70	650WMPL1500	1.2	1500	800	660.4	150	-	-	FDP14/ FDM14	Al
WR510	1.45-2.20	510WMPL1300	1.2	1300	800	609.6	150	-	-	FDP18/ FDM18	Al
WR430	1.70-2.60	430WMPL1200	1.2	1200	800	558.8	150	210	106.4	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WMPL1200	1.2	1200	800	508	150	180	95.3	FDP26/ FDM26/ APF340	Al
WR284	2.60-3.95	284WMPL1200	1.15	1200	800	457.2	150	160	76.2	FDP32/ FDM32/ FEP32/ FAP32/ FAM32/ FAE32/ APF284B/ APF284/ APF284C	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR229	3.30-4.90	229WMPL1000	1.15	1000	800	304.8	101.6	-	-	FDP40/ FDM40/ FEP40/ FAP40/ FAM40/ FAE40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WMPL750	1.15	750	750	279.4	101.6	100	63.5	FDP48/ FDM48/ FEP48/ FAP48/ FAM48/ FAE48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WMPL625	1.15	625	625	279.4	101.6	90	61.9	FDP58/ FEP58/ FAP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WMPL500	1.15	500	400	279.4	101.6	80	49.2	FDP70/ FDM70/ FEP70/ FAP70/ FAM70/ FAE70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WMPL425	1.15	425	400	279.4	100	70	47.8	FBP84/ FBM84/ FBE84/ FDP84/ FDM84/ FEP84/ APF112B/ APF112	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR90	8.20-12.4	90WMPL225	1.15	225	225	139.7	30.48	60.0	40.0	FBP100/ FBM100/ FBE100/ FDP100/ FDM100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR75	10.0-15.0	75WMPL200	1.15	200	200	127	30.48	60	38	FBP120/ FBM120/ FBE120/ FDP120/ FDM120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WMPL100	1.15	100	200	114.3	30.48	50	36	FBP140/ FBM140/ FBE140/ FDP140/ FDM140/ APF62	Al
WR51	15.0-22.0	51WMPL100	1.15	100	120	114.3	30.48	-	-	FBP180/ FBM180/ FBE180/ FDP180/ FDM180/ APF51C/ APF51B/ APF51A	Al
WR42	18.0-26.5	42WMPL100	1.2	100	120	114.3	30.48	40	24.3	FBP220/ FBM220/ FBE220/ APF42	Al
WR34	22.0-33.0	34WMPL75	1.2	75	80	101.6	25.4	40	24.3	FBP260/ FBM260/ FBE260/ APF34	Al
WR28	26.5-40.0	28WMPL75	1.2	75	50	101.6	25.4	40.0	22.6	FBP320/ FBM320/ FBE320/ APF28	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR22	33.0-50.0	22WMPL50	1.2	50	30	170.2	55.9	40	28.6	FUGP400 /APF22/ APF22A	Al
WR19	40.0-60.0	19WMPL45	1.2	45	25	177.8	63.5	40	28.6	FUGP500 /APF19/ APF19A	Al
WR15	50.0-75.0	15WMPL35	1.2	35	25	151.6	50	40	23.6	FUGP620 /APF15/ APF15A	Al
WR12	60.0-90.0	12WMPL30	1.2	30	20	157.5	55.9	40	23.6	FUGP740 /APF12/ APF12A	Al
WR10	75.0-110.0	10WMPL25	1.2	25	15	157.5	55.9	40	23.6	FUGP900 /APF10/ APF10A	Al

### WG Load - High Power



* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

Ordering Information  
P/N :

<u>650</u>	<u>WHPL</u>	<u>2500</u>
WR Size	Product Code	Average Power

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR650	1.12-1.70	650WHPL2500	1.2	2500	800	660.4	150	-	-	FDP14/ FDM14	Al
WR650	1.12-1.70	650WHPL5500	1.15	5500	5500	850.9	150	-	-	FDP14/ FDM14	Al
WR650	1.12-1.70	650WHPL8000	1.15	8000	5500	850.9	150	-	-	FDP14/ FDM14	Al
WR510	1.45-2.20	510WHPL2500	1.2	2500	800	609.6	150	-	-	FDP18/ FDM18	Al
WR510	1.45-2.20	510WHPL5000	1.15	5000	4500	749.3	150	-	-	FDP18/ FDM18	Al
WR510	1.45-2.20	510WHPL7000	1.15	7000	4500	749.3	150	-	-	FDP18/ FDM18	Al
WR430	1.70-2.60	430WHPL2500	1.2	2500	800	558.8	150	210	194.6	FDP22/ FDM22/ APF430	Al
WR430	1.70-2.60	430WHPL4500	1.15	4500	4000	700	150	-	-	FDP22/ FDM22/ APF430	Al
WR430	1.70-2.60	430WHPL6500	1.15	6500	4000	700	150	260	214.6	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WHPL2500	1.2	2500	800	508	150	190	183.2	FDP26/ APF340	Al
WR340	2.20-3.30	340WHPL4000	1.15	4000	3500	660.4	150	-	-	FDP26/ FDM26/ APF340	Al
WR340	2.20-3.30	340WHPL5500	1.15	5500	3500	660.4	150	260	203.2	FDP26/ FDM26/ APF340	Al

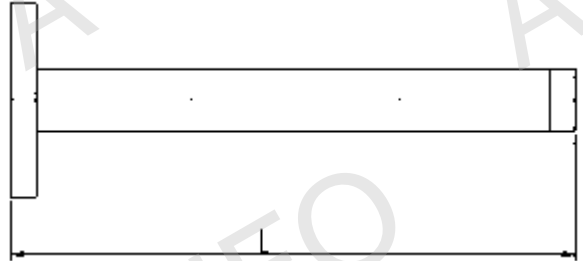


EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR284	2.60-3.95	284WHPL2400	1.15	2400	800	457.2	150	160	154	FDP32/ FDM32/	Al
WR284	2.60-3.95	284WHPL3500	1.1	3500	3200	610	150	160	154	FEP32/ FAP32/	Al
WR284	2.60-3.95	284WHPL5000	1.1	5000	3200	610	150	260	194	FAM32/ FAE32/ APF284B/ APF284/ APF284C	Al
WR229	3.30-4.90	229WHPL2000	1.15	2000	800	304.8	101.6	-	-	FDP40/ FDM40/	Al
WR229	3.30-4.90	229WHPL3000	1.1	3000	2000	457.2	101.6	-	-	FEP40/ FAP40/	Al
WR229	3.30-4.90	229WHPL4000	1.1	4000	2000	457.2	101.6	-	-	FAM40/ FAE40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WHPL1500	1.15	1500	750	279.4	101.6	121	121.2	FDP48/ FDM48/	Al
WR187	3.95-5.85	187WHPL2000	1.1	2000	2000	457.2	101.6	121	121.2	FEP48/ FAP48/	Al
WR187	3.95-5.85	187WHPL3000	1.1	3000	2000	457.2	101.6	160	150.2	FAM48/ FAE48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WHPL1300	1.15	1300	625	279.4	101.6	121	119.4	FDP58/	Al
WR159	4.90-7.05	159WHPL2000	1.1	2000	1000	457.2	101.6	121	119.2	FEP58/ FAP58/	Al
WR159	4.90-7.05	159WHPL3000	1.1	3000	1000	457.2	101.6	160	148.2	APF159/ APF159B	Al
WR137	5.85-8.20	137WHPL1000	1.15	1000	400	279.4	101.6	121	108.8	FDP70/	Al
WR137	5.85-8.20	137WHPL1500	1.1	1500	400	457.2	101.6	121	108.8	FAP70/ FEP70/	Al
WR137	5.85-8.20	137WHPL3000	1.1	3000	710	457.2	101.6	160	149.8	APF137/ APF137C	Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR112	7.05-10.0	112WHPL850	1.15	850	400	279.4	100	121	105.6	FBP84/ FBM84/ FBE84/ FDP84/ FDM84/ FEP84/ APF112B/ APF112	Al
WR112	7.05-10.0	112WHPL1500	1.1	1500	400	350	100	121	105.6		Al
WR112	7.05-10.0	112WHPL2000	1.1	2000	460	350	100	120	84.6		Al
WR112	7.05-10.0	112WHPL3000	1.15	3000	550	546.1	190.5	-	-		Al
WR90	8.20-12.4	90WHPL500	1.15	500	225	139.7	30.48	90	88	FBP100/ FBM100/ FBE100/ FDP100/ FDM100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR90	8.20-12.4	90WHPL750	1.15	750	225	139.7	30.48	121	107		Al
WR90	8.20-12.4	90WHPL1100	1.1	1100	290	355.6	40.64	90	88		Al
WR90	8.20-12.4	90WHPL1700	1.1	1700	290	355.6	40.64	-	107		Al
WR90	8.20-12.4	90WHPL4500	1.15	4500	450	660.4	304.8	160	150.1		Al
WR75	10.0-15.0	75WHPL350	1.15	350	200	127	30.48	90	86	FBP120/ FBM120/ FBE120/ FDP120/ FDM120/ APF75B/ APF75A	Al
WR75	10.0-15.0	75WHPL550	1.15	550	200	127	30.48	121	105		Al
WR75	10.0-15.0	75WHPL1000	1.1	1000	200	355.6	40.64	90	86		Al
WR75	10.0-15.0	75WHPL1500	1.1	1500	250	355.6	40.64	121	105		Al
WR75	10.0-15.0	75WHPL3500	1.15	3500	270	660.4	304.8	160	150.1		Al
WR62	12.4-18.0	62WHPL300	1.15	300	200	114.3	30.48	85	82	FBP140/ FBM140/ FBE140/ FDP140/ FDM140/ APF62	Al
WR62	12.4-18.0	62WHPL800	1.1	800	200	203.2	38.1	-	-		Al
WR62	12.4-18.0	62WHPL1400	1.1	1400	200	203.2	38.1	121	111		Al
WR62	12.4-18.0	62WHPL3000	1.15	3000	200	660.4	304.8	160	150.1		Al
WR51	15.0-22.0	51WHPL260	1.15	260	120	114.3	30.48	-	-	FBP180/ FBM180/ FBE180/ FDP180/ FDM180/ APF51C/ APF51B/ APF51A	Al
WR51	15.0-22.0	51WHPL700	1.1	700	150	203.2	38.1	-	-		Al
WR51	15.0-22.0	51WHPL1200	1.1	1200	150	203.2	38.1	-	-		Al
WR42	18.0-26.5	42WHPL230	1.2	230	120	114.3	30.48	70	70.3	FBP220/ FBM220/ FBE220/ APF42	Al
WR42	18.0-26.5	42WHPL600	1.15	600	120	177.8	25.4	55	60.3		Al
WR42	18.0-26.5	42WHPL1000	1.15	1000	120	177.8	25.4	70	70.3		Al

EIA WR	* Freq. (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	* Mat.
WR34	22.0-33.0	34WHPL150	1.2	150	80	101.6	25.4	55	60.3	FBP260/ FBM260/ FBE260/ APF34	Al
WR34	22.0-33.0	34WHPL400	1.2	400	100	177.8	25.4	55	60.3	FBP320/ FBM320/ FBE320/ APF28	Al
WR34	22.0-33.0	34WHPL700	1.2	700	100	177.8	25.4	70	70.3		Al
WR28	26.5-40.0	28WHPL125	1.2	125	50	101.6	25.4	55	59.6		Al
WR28	26.5-40.0	28WHPL300	1.2	300	100	177.8	25.4	55	59.6	FUGP400 /APF22/ APF22A	Al
WR28	26.5-40.0	28WHPL500	1.2	500	100	177.8	25.4	70	69.6		Al
WR22	33.0-50.0	22WHPL115	1.2	115	30	170.2	55.9	70	70.3		Al
WR22	33.0-50.0	22WHPL300	1.2	300	60	233.7	55.9	55	60.3	FUGP500 /APF19/ APF19A	Al
WR22	33.0-50.0	22WHPL500	1.2	500	60	233.7	55.9	70	70.3		Al
WR19	40.0-60.0	19WHPL100	1.2	100	25	177.8	63.5	70	70.3		Al
WR19	40.0-60.0	19WHPL250	1.2	250	50	241.3	63.5	55	60.3	FUGP620 /APF15/ APF15A	Al
WR19	40.0-60.0	19WHPL400	1.2	400	50	241.3	63.5	70	70.3		Al
WR15	50.0-75.0	15WHPL60	1.2	60	25	151.6	50	55	59.6		Al
WR15	50.0-75.0	15WHPL150	1.2	150	50	227.8	50	55	59.6	FUGP740 /APF12/ APF12A	Al
WR15	50.0-75.0	15WHPL200	1.2	200	60	227.8	50	70	69.6		Al
WR15	50.0-75.0	15WHPL250	1.2	250	50	227.8	50	70	69.6		Al
WR12	60.0-90.0	12WHPL50	1.2	50	20	157.5	55.9	55	59.6	FUGP900 /APF10/ APF10A	Al
WR12	60.0-90.0	12WHPL120	1.2	120	40	233.7	55.9	55	59.6		Al
WR12	60.0-90.0	12WHPL200	1.2	200	40	233.7	55.9	70	69.6		Al
WR10	75.0-110.0	10WHPL40	1.2	40	15	157.5	55.9	55	59.6	FUGP900 /APF10/ APF10A	Al
WR10	75.0-110.0	10WHPL100	1.2	100	30	233.7	55.9	55	59.6		Al
WR10	75.0-110.0	10WHPL150	1.2	150	30	233.7	55.9	70	69.6		Al
WR10	75.0-110.0	10WHPL200	1.2	200	30	261.6	83.8	70	70.3		Al

### WG Load - Double Ridge Low Power



* Freq. = Frequency	* Avg. = Average
* Mat. = Material	

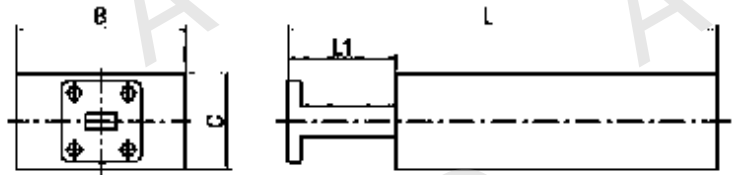
#### Ordering Information

P/N :

<u>650</u>	<u>DRWLPL</u>
WRD Size	Product Code

EIA WRD	* Freq. Range (GHz)	P/N	VSWR Max.	* Avg. Power (W)	Length (mm/inch)	Flange	* Mat.
WRD200	2.0-4.8	200DRWLPL	1.1	10	304.8/12	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWLPL	1.1	10	279.4/11	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWLPL	1.1	5	266.7/10.5	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWLPL	1.1	5	215.9/8.5	FPWRD475D24	Al
WRD580	5.8-16.0	580DRWLPL	1.1	5	177.8/7	FPWRD580D28	Al
WRD650	6.5-18.0	650DRWLPL	1.1	5	101.6/4	FPWRD650D28	Al
WRD750	7.5-18.0	750DRWLPL	1.1	5	101.6/4	FPWRD750D24	Al
WRD110	11.0-26.5	110DRWLPL_Cu	1.15	3	76.2/3	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWLPL_Cu	1.15	3	55.9/2.2	FPWRD180C24	Cu

### WG Load - Double Ridge Medium Power



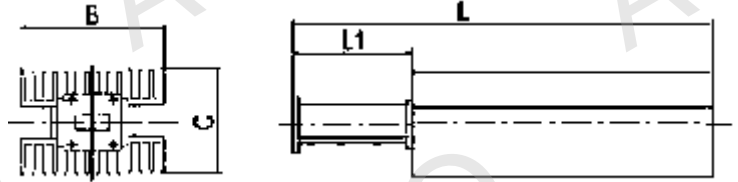
* Freq. = Frequency	* Avg. P. = Average Power
* Mat. = Material	* L = Length

Ordering Information  
P/N :

<u>650</u>	<u>DRWMPL</u>
WRD Size	Product Code

EIA WRD	* Freq. Range (GHz)	P/N	VSWR	* Avg. P. (W)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange	* Mat.
WRD 650	6.5-18.0	650DRWMPL250	1.25	250	304.8	30.48	60	36	FPWRD650D28	Al
WRD 750	7.5-18.0	750DRWMPL250	1.25	250	304.8	30.48	60	36	FPWRD750D24	Al

### WG Load - Double Ridge High Power



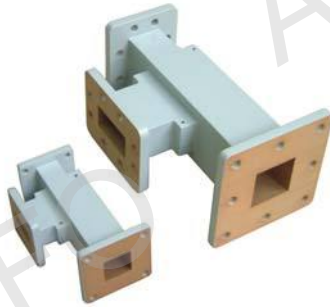
* Freq. = Frequency	* Avg. P. = Average Power
* Mat. = Material	* L= Length

Ordering Information  
P/N :

<u>650</u>	<u>DRWMPL</u>
WRD Size	Product Code

EIA WRD	* Freq. Range (GHz)	P/N	VSWR	* Avg. P. (W)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange	*Mat.
WRD 200	2.0-4.8	200DRWHPL5500	1.25	5500	927.1	63.5	260	210.6	FPWRD200D24	Al
WRD 650	6.5-18.0	650DRWHPL400	1.25	400	304.8	30.48	70	74	FPWRD650D28	Al
WRD 650	6.5-18.0	650DRWHPL700	1.25	700	304.8	30.48	130	130	FPWRD650D28	Al
WRD 750	7.5-18.0	750DRWHPL400	1.25	400	304.8	30.48	70	74	FPWRD750D24	Al
WRD 750	7.5-18.0	750DRWHPL700	1.25	700	304.8	30.48	130	130	FPWRD750D24	Al

### WG Ortho-Mode Transducer (OMT)



#### Ordering Information

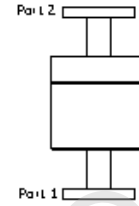
P/N :

* Freq. = Frequency	* BW = Bandwidth
* Mat. = Material	

<u>975</u>	<u>WOMT</u>
WR Size	Product Code

P/N	* Freq. (GHz)	* BW	EIA WR	VSWR Typ.	Port to Port Isolation (dB) Min.	Flange	* Mat.
975WOMT	0.75-1.12	20%	WR975	1.5	30	FDP9	Al
770WOMT	0.96-1.45	20%	WR770	1.5	30	FDP12	Al
650WOMT	1.12-1.70	20%	WR650	1.5	30	FDP14	Al
510WOMT	1.45-2.20	20%	WR510	1.5	30	FDP18	Al/Cu
430WOMT	1.70-2.60	20%	WR430	1.5	30	FDP22	Al/Cu
340WOMT	2.20-3.30	20%	WR340	1.5	30	FDP26	Al/Cu
284WOMT	2.60-3.95	20%	WR284	1.5	30	FDP32	Al/Cu
229WOMT	3.30-4.90	20%	WR229	1.5	30	FDP40	Al/Cu
187WOMT	3.95-5.85	20%	WR187	1.5	30	FDP48	Al/Cu
159WOMT	4.90-7.05	20%	WR159	1.5	30	FDP58	Al/Cu
137WOMT	5.85-8.20	20%	WR137	1.5	30	FDP70	Al/Cu
112WOMT	7.05-10.0	20%	WR112	1.5	30	FBP84	Al/Cu
90WOMT	8.20-12.4	20%	WR90	1.5	30	FBP100	Al/Cu
75WOMT	10.0-15.0	20%	WR75	1.5	30	FBP120	Al/Cu
62WOMT	12.4-18.0	20%	WR62	1.5	30	FBP140	Al/Cu
51WOMT	15.0-22.0	20%	WR51	1.5	30	FBP180	Al/Cu
42WOMT	18.0-26.5	20%	WR42	1.5	30	FBP220	Al/Cu
34WOMT	22.0-33.0	20%	WR34	1.5	30	FBP260	Al/Cu
28WOMT	26.5-40.0	20%	WR28	1.5	30	FBP320	Al/Cu

### WG Rotary Joint (I Type)



* Freq. = Frequency	* BW = Bandwidth
* I.L. = Insertion Loss	* Avg. = Average
* Mat. = Material	

Ordering Information  
P/N :

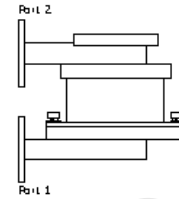
<u>284</u>	<u>WRJI</u>
WR Size	Product Code

P/N	* Freq. (GHz)	EIA WR	* BW (MHz)	VSWR	* I.L. (dB)	* Avg. Power (W)	Peak Power (KW)	Flange	* Mat.
284WRJI	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJI	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJI	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
187WRJI-06A	4.4-4.6	WR187	FULL	1.20	0.3	600	600	FDP48	Al/ Cu
187WRJI-06B	4.8-5.0	WR187	FULL	1.20	0.3	600	600	FDP48	Al/ Cu
159WRJI	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJI	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJI	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
112WRJI-06A	7.05-10.0	WR112	FULL	1.25	0.3	400	150	FBP84	Al
112WRJI-06B	7.50-8.50	WR112	FULL	1.25	0.3	400	150	FBP84	Al
112WRJI-06C	8.50-10.0	WR112	FULL	1.25	0.3	400	150	FBP84	Al
90WRJI	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
90WRJI-06A	8.50-10.0	WR90	FULL	1.15	0.15	400	150	FBP100	Al



P/N	* Freq. (GHz)	EIA WR	* BW (MHz)	VSWR	* I.L. (dB)	* Avg. Power (W)	Peak Power (KW)	Flange	* Mat.
75WRJI	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
62WRJI	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
62WRJI-06A	16.0-17.0	WR62	FULL	1.30	0.4	100	4	FBP140	Al
51WRJI	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al
42WRJI	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al
34WRJI	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJI	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

### WG Rotary Joint (U Type)



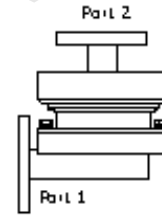
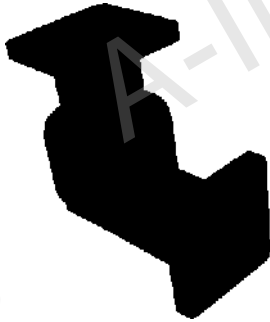
*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Avg. = Average
*Mat. = Material	

Ordering Information, P/N:

<u>284</u>	<u>WRJU</u>
WR Size	Product Code

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
284WRJU	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJU	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJU	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
159WRJU	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJU	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJU	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
90WRJU	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
75WRJU	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
62WRJU	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
51WRJU	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al
42WRJU	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al
34WRJU	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJU	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

### WG Rotary Joint (L Type)



Ordering Information  
P/N :

* Freq. = Frequency	* BW = Bandwidth
* I.L. = Insertion Loss	* Avg. = Average
* Mat. = Material	

<u>284</u>	<u>WRJL</u>
WR Size	Product Code

P/N	* Freq. (GHz)	EIA WR	* BW (MHz)	VSWR	* I.L. (dB)	* Avg. Power (W)	Peak Power (KW)	Flange	* Mat.
284WRJL	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJL	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJL	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
159WRJL	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJL	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJL	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
90WRJL	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
90WRJL-06A	8.50-10.0	WR90	FULL	1.25	0.3	400	150	FBP100	Al
75WRJL	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
75WRJL_Cu	10.0-15.0	WR75	750	1.30	0.3	-	-	FBP120	Cu
62WRJL	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
51WRJL	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al

P/N	* Freq. (GHz)	EIA WR	* BW (MHz)	VSWR	* I.L. (dB)	* Avg. Power (W)	Peak Power (KW)	Flange	* Mat.
42WRJL	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al
34WRJL	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJL	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

### WG Short Plates



Figure 1

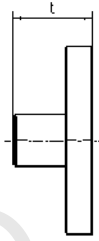


Figure 2

#### Ordering Information

P/N :

<u>975</u>	<u>WS</u>
WR Size	Product Code

* Freq. = Frequency	* T = Thickness
* Mat. = Material	* N.W. = Net Weight

EIA WR	* Freq. (GHz)	WG Fixed Flush Shorts			Flange	* Mat.	* N.W.
		P/N	Figure	* T (mm)			
WR975	0.75-1.12	975WS	Figure1	14	FDP9	Al	2.70
WR770	0.96-1.45	770WS	Figure1	12	FDP12	Al	1.75
WR650	1.12-1.70	650WS	Figure1	12	FDP14	Al	1.00
WR510	1.45-2.20	510WS	Figure1	12	FDP18	Al	0.75
WR430	1.70-2.60	430WS	Figure1	10	FDP22	Al	0.50
WR340	2.20-3.30	340WS	Figure1	10	FDP26	Al	0.40
WR284	2.60-3.95	284WS	Figure1	8	FDP32	Al	0.20
		284WS_PB			APF284B		
WR229	3.30-4.90	229WS	Figure1	8	FDP40	Al	0.15
WR187	3.95-5.85	187WS	Figure1	7	FDP48	Al	0.13
		187WS_P0			APF187		
WR159	4.90-7.05	159WS	Figure1	7	FDP58	Al	0.10
WR137	5.85-8.20	137WS	Figure1	7	FDP70	Al	0.07
		137WS_P0			APF137		
WR112	7.05-10.0	112WS	Figure1	5	FBP84	Al	0.05
		112WS_P0			APF112		
WR90	8.20-12.4	90WS_Cu	Figure1	5	FBP100	Cu	0.07
		90WS_Cu_P0			APF90		
		90WS_Cu_PA			APF90A		
WR75	10.0-15.0	75WS_Cu	Figure1	5	FBP120	Cu	0.06
WR62	12.4-18.0	62WS_Cu	Figure1	5	FBP140	Cu	0.05
WR51	15.0-22.0	51WS_Cu	Figure1	5	FBP180	Cu	0.03
		51WS_Cu_PA			APF51A		
		51WS_Cu_PB			APF51B		
WR42	18.0-26.5	42WS_Cu	Figure1	4	FBP220	Cu	0.01
WR34	22.0-33.0	34WS_Cu	Figure1	4	FBP260	Cu	0.01
		34WS_Cu_P0			APF34		
WR28	26.5-40.0	28WS_Cu	Figure1	3	FBP320	Cu	0.01

EIA WR	* Freq. (GHz)	WG Fixed Flush Shorts			Flange	* Mat.	* N.W.
		P/N	Figure	* T (mm)			
WR22	33.0-50.0	22WS_Cu	Figure2	12	FUGP400	Cu	0.02
WR19	40.0-60.0	19WS_Cu	Figure2	12	FUGP500	Cu	0.02
WR15	50.0-75.0	15WS_Cu	Figure2	10	FUGP620	Cu	0.01
WR12	60.0-90.0	12WS_Cu	Figure2	10	FUGP740	Cu	0.01
WR10	75.0-110.0	10WS_Cu	Figure2	10	FUGP900	Cu	0.01

### Offset Short - 1/8 & 3/8 Wavelength



Ordering Information

P/N :

*Freq. = Frequency	*T = Thickness
*Mat. = Material	

<u>975</u>	<u>WOFS</u>	<u>18</u>
WR Size	Product Code	1/8 Wavelength

EIA WR	* Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	* Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR975	0.75-1.12	975WOFS18	54.09	975WOFS38	162.32	FDP9	Al
WR770	0.96-1.45	770WOFS18	41.43	770WOFS38	124.29	FDP12	Al
WR650	1.12-1.70	650WOFS18	35.81	650WOFS38	107.42	FDP14/ FDM14	Al
WR510	1.45-2.20	510WOFS18	27.3	510WOFS38	81.91	FDP18/ FDM18	Al
WR430	1.70-2.60	430WOFS18	23.34	430WOFS38	70.01	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WOFS18	18.02	340WOFS38	54.07	FDP26/ FDM26/ APF340	Al
WR284	2.60-3.95	284WOFS18	15.23	284WOFS38	45.68	FDP32/ FDM32/ APF284/ APF284B/ APF284C	Al
WR229	3.30-4.90	229WOFS18	12.03	229WOFS38	36.1	FDP40/ FDM40/ APF22/ APF229B	Al
WR187	3.95-5.85	187WOFS18	10.26	187WOFS38	30.77	FDP48/ FDM48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WOFS18	8.15	159WOFS38	24.46	FDP58/ FDM58/ APF159/ APF159B	Al

EIA WR	* Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	* Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR137	5.85-8.20	137WOFS18	6.85	137WOFS38	20.54	FDP70/ FDM70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WOFS18	5.68	112WOFS38	17.03	FBP84/ FBM84/ FBE84/ APF112/ APF112B	Al
WR90	8.20-12.4	90WOFS18_Cu	4.85	90WOFS38_Cu	14.55	FBP100/ FBM100/ FBE100/ APF90/ APF90A/ APF90B	Cu
WR75	10.0-15.0	75WOFS18_Cu	3.96	75WOFS38_Cu	11.87	FBP120/ FBM120/ FBE120/ APF75A/ APF75B	Cu
WR62	12.4-18.0	62WOFS18_Cu	3.22	62WOFS38_Cu	9.66	FBP140/ FBM140/ FBE140/ APF62	Cu
WR51	15.0-22.0	51WOFS18_Cu	2.65	51WOFS38_Cu	7.96	FBP180/ FBM180/ FBE180/ APF51A/ APF51B/ APF51C	Cu
WR42	18.0-26.5	42WOFS18_Cu	2.22	42WOFS38_Cu	6.67	FBP220/ FBM220/ FBE220/ APF42	Cu
WR34	22.0-33.0	34WOFS18_Cu	1.8	34WOFS38_Cu	5.41	FBP260/ FBM260/ FBE260/ APF34	Cu
WR28	26.5-40.0	28WOFS18_Cu	1.51	28WOFS38_Cu	4.49	FBP320/ FBM320/ FBE320/ APF28	Cu



EIA WR	* Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	* Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR22	33.0-50.0	22WOFS18_Cu	1.21	22WOFS38_Cu	3.6	FUGP400/ APF22/ APF22A	Cu
WR19	40.0-60.0	19WOFS18_Cu	0.99	19WOFS38_Cu	2.96	FUGP500/ APF19/ APF19A	Cu
WR15	50.0-75.0	15WOFS18_Cu	0.8	15WOFS38_Cu	2.4	FUGP620/ APF15/ APF15A	Cu
WR12	60.0-90.0	12WOFS18_Cu	0.67	12WOFS38_Cu	2.02	FUGP740/ APF12/ APF12A	Cu
WR10	75.0- 110.0	10WOFS18_Cu	0.54	10WOFS38_Cu	1.62	FUGP900/ APF10/ APF10A	Cu

### Offset Short - 1/4 Wavelength



#### Ordering Information

P/N :

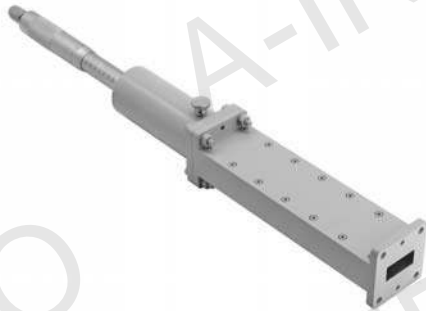
* Freq. = Frequency	* T = Thickness
* Mat. = Material	

<u>975</u>	<u>WOFS</u>	<u>14</u>
WR Size	Product Code	1/4 Wavelength

EIA WR	* Freq. (GHz)	1/4 WOFS		Flange	* Mat.
		P/N	* T (mm)		
WR975	0.75-1.12	975WOFS14	108.21	FDP9	Al
WR770	0.96-1.45	770WOFS14	82.86	FDP12	Al
WR650	1.12-1.70	650WOFS14	71.62	FDP14/FDM14	Al
WR510	1.45-2.20	510WOFS14	54.61	FDP18/FDM18	Al
WR430	1.70-2.60	430WOFS14	46.68	FDP22/FDM22/APF430	Al
WR340	2.20-3.30	340WOFS14	36.05	FDP26/FDM26/APF340	Al
WR284	2.60-3.95	284WOFS14	30.45	FDP32/FDM32/APF284/ APF284B/APF284C	Al
WR229	3.30-4.90	229WOFS14	24.06	FDP40/FDM40/ APF22/APF229B	Al
WR187	3.95-5.85	187WOFS14	20.51	FDP48/FDM48/ APF187/APF187C	Al
WR159	4.90-7.05	159WOFS14	16.31	FDP58/FDM58/ APF159/APF159B	Al
WR137	5.85-8.20	137WOFS14	13.69	FDP70/FDM70/ APF137/APF137C	Al
WR112	7.05-10.0	112WOFS14	11.36	FBP84/FBM84/FBE84/ APF112/APF112B	Al
WR90	8.20-12.4	90WOFS14_Cu	9.7	FBP100/FBM100/FBE100/ APF90/APF90A/APF90B	Cu
WR75	10.0-15.0	75WOFS14_Cu	7.91	FBP120/FBM120/FBE120/ APF75A/APF75B	Cu
WR62	12.4-18.0	62WOFS14_Cu	6.44	FBP140/FBM140/ FBE140/APF62	Cu
WR51	15.0-22.0	51WOFS14_Cu	5.31	FBP180/FBM180/FBE180/ APF51A/APF51B/APF51C	Cu
WR42	18.0-26.5	42WOFS14_Cu	4.45	FBP220/FBM220/ FBE220/APF42	Cu
WR34	22.0-33.0	34WOFS14_Cu	3.6	FBP260/FBM260/ FBE260/APF34	Cu

EIA WR	* Freq. (GHz)	1/4 WOFS		Flange	* Mat.
		P/N	* T (mm)		
WR28	26.5-40.0	28WOFS14_Cu	2.99	FBP320/FBM320/FBE320/APF28	Cu
WR22	33.0-50.0	22WOFS14_Cu	2.4	FUGP400/APF22/APF22A	Cu
WR19	40.0-60.0	19WOFS14_Cu	1.97	FUGP500/APF19/APF19A	Cu
WR15	50.0-75.0	15WOFS14_Cu	1.6	FUGP620/APF15/APF15A	Cu
WR12	60.0-90.0	12WOFS14_Cu	1.35	FUGP740/APF12/APF12A	Cu
WR10	75.0-110.0	10WOFS14_Cu	1.08	FUGP900/APF10/APF10A	Cu

### Waveguide Sliding Short Plates



Ordering Information

P/N :

90	WPSS
90	WSS
WR Size	Product Code

EIA WR	Frequency (GHz)	Precision Version	General Version	VSWR (Min.)	Flange	* Mat.
		P/N	P/N			
WR650	1.12-1.70	650WPSS	650WSS	50	FDP14	Al
WR510	1.45-2.20	510WPSS	510WSS	50	FDP18	Al
WR430	1.70-2.60	430WPSS_P0	430WSS	50	FDP22/APF430	Al
WR340	2.20-3.30	340WPSS_P0	340WSS	50	FDP26/APF340	Al
WR284	2.60-3.95	284WPSS_PB	284WSS	50	FDP32/FAP32/FEP32/ APF284B/APF284 /APF284C	Al
WR229	3.30-4.90	229WPSS_P0	229WSS	50	FDP40/FAP40/FEP40/ APF229/APF229B	Al
WR187	3.95-5.85	187WPSS_P0	187WSS	50	FDP48/FAP48/FEP48/ APF187/APF187C	Al
WR159	4.90-7.05	159WPSS_P0	159WSS	50	FDP58/FAP58/FEP58/ APF159/APF159B	Al
WR137	5.85-8.20	137WPSS_P0	137WSS	50	FDP70/FAP70/FEP70/ APF137/APF137C	Al
WR112	7.05-10.0	112WPSS_PB	112WSS	50	FBP84/FDP84/FEP84/ APF112B/APF112	Al
WR90	8.20-12.4	90WPSS_PB	90WSS	50	FBP100/FDP100/FEP100/ APF90B/APF90/APF90A	Al
WR75	10.0-15.0	75WPSS_PB	75WSS	50	FBP120/FDP120/ APF75B/APF75A	Al
WR62	12.4-18.0	62WPSS_P0	62WSS	50	FBP140/FDP140/APF62	Al

EIA WR	Frequency (GHz)	Precision Version	General Version	VSWR (Min.)	Flange	* Mat.
		P/N	P/N			
WR51	15.0-22.0	51WPSS_Cu_PC	51WSS_Cu	50	FBP180/FDP180/ APF51C/APF51B/ APF51A	Cu
WR42	18.0-26.5	42WPSS_Cu_P0	42WSS_Cu	50	FBP220/APF42	Cu
WR34	22.0-33.0	34WPSS_Cu_P0	34WSS_Cu	50	FBP260/APF34	Cu
WR28	26.5-40.0	28WPSS_Cu_P0	28WSS_Cu	50	FBP320/APF28	Cu
WR22	33.0-50.0	22WPSS_Cu_P0	22WSS_Cu	50	FUGP400/APF22/APF22A	Cu
WR19	40.0-60.0	19WPSS_Cu_P0	19WSS_Cu	50	FUGP500/APF19/APF19A	Cu
WR15	50.0-75.0	15WPSS_Cu_P0	15WSS_Cu	50	FUGP620/APF15/APF15A	Cu
WR12	60.0-90.0	12WPSS_Cu_P0	12WSS_Cu	50	FUGP740/APF12/APF12A	Cu
WR10	75.0-110.0	10WPSS_Cu_P0	10WSS_Cu	50	FUGP900/APF10/APF10A	Cu

### Double Ridge Waveguide Short Plates



Ordering Information

P/N :

<u>84</u>	<u>DRWS</u>
WR Size	Product Code

EIA WRD	Frequency (GHz)	WG Fixed Flush Shorts		Material
		P/N	Flange	
WRD84	0.84-2.0	84DRWS	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWS	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWS	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWS	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWS_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWS_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWS_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWS_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWS_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWS_Cu	FPWRD180C24	Cu

### Double Ridge Offset Short - 1/8 & 3/8 Wavelength



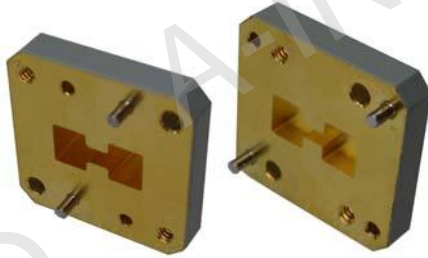
#### Ordering Information

P/N :

<u>84</u>	<u>DRWOFs</u>	<u>18</u>
WR Size	Product Code	1/8 Wavelength

EIA WRD	Frequency (GHz)	1/8 DRWOFs	3/8 DRWOFs	Flange	Material
		P/N	P/N		
WRD84	0.84-2.0	84DRWOFs18	84DRWOFs38	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWOFs18	200DRWOFs38	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWOFs18	250DRWOFs38	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWOFs18	350DRWOFs38	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWOFs18_Cu	475DRWOFs38_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWOFs18_Cu	580DRWOFs38_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWOFs18_Cu	650DRWOFs38_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWOFs18_Cu	750DRWOFs38_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWOFs18_Cu	110DRWOFs38_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWOFs18_Cu	180DRWOFs38_Cu	FPWRD180C24	Cu

### Double Ridge Offset Short - 1/4 Wavelength



Ordering Information

P/N :

<u>84</u>	<u>DRWOFS</u>	<u>14</u>
WR Size	Product Code	1/4 Wavelength

EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	84DRWOFS14	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWOFS14	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWOFS14	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWOFS14	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWOFS14_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWOFS14_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWOFS14_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWOFS14_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWOFS14_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWOFS14_Cu	FPWRD180C24	Cu



### WG Spacer - 1/4 Wavelength (Shim)



* Freq. = Frequency	* T = Thickness
* Mat. = Material	

#### Ordering Information

P/N :

<u>975</u>	<u>WSPA</u>	<u>14</u>
WR Size	Product Code	1/4 Wavelength

EIA WR	* Freq. (GHz)	1/4 WSPA (Shim)		Flange	* Mat.
		P/N	* T (mm)		
WR975	0.75-1.12	975WSPA14	108.21	FDP9	Al
WR770	0.96-1.45	770WSPA14	82.86	FDP12	Al
WR650	1.12-1.70	650WSPA14	71.62	FDP14	Al
WR510	1.45-2.20	510WSPA14	54.61	FDP18	Al
WR430	1.70-2.60	430WSPA14	46.68	APF430	Al
WR340	2.20-3.30	340WSPA14	36.05	APF340	Al
WR284	2.60-3.95	284WSPA14	30.45	FDP32	Al
		284WSPA14_PB		APF284B	
WR229	3.30-4.90	229WSPA14	24.06	APF229	Al
WR187	3.95-5.85	187WSPA14	20.51	FDP48	Al
		187WSPA14_P0		APF187	
WR159	4.90-7.05	159WSPA14	16.31	APF159	Al
WR137	5.85-8.20	137WSPA14	13.69	FDP70	Al
		137WSPA14_P0		APF137	
WR112	7.05-10.0	112WSPA14	11.36	APF112B	Al
		112WSPA14_P0		APF112	
WR90	8.20-12.4	90WSPA14_Cu	9.7	APF90B	Cu
		90WSPA14_Cu_P0		APF90	
		90WSPA14_Cu_PA		APF90A	
WR75	10.0-15.0	75WSPA14_Cu	7.91	APF75B	Cu
WR62	12.4-18.0	62WSPA14_Cu	6.44	APF62	Cu
WR51	15.0-22.0	51WSPA14_Cu	5.31	APF51C	Cu
		51WSPA14_Cu_PA		APF51A	
		51WSPA14_Cu_PB		APF51B	
WR42	18.0-26.5	42WSPA14_Cu	4.45	APF42	Cu
WR34	22.0-33.0	34WSPA14_Cu	3.6	FBP260	Cu
		34WSPA14_Cu_P0		APF34	
WR28	26.5-40.0	28WSPA14_Cu	2.99	APF28	Cu

EIA WR	* Freq. (GHz)	1/4 WSPA (Shim)		Flange	* Mat.
		P/N	* T (mm)		
WR22	33.0-50.0	22WSPA14_Cu	2.4	APF22	Cu
WR19	40.0-60.0	19WSPA14_Cu	1.97	APF19	Cu
WR15	50.0-75.0	15WSPA14_Cu	1.6	APF15	Cu
WR12	60.0-90.0	12WSPA14_Cu	1.35	APF12	Cu
WR10	75.0-110.0	10WSPA14_Cu	1.08	APF10	Cu

### WG Spacer - Customized (Shim)



#### Ordering Information

P/N :

\*Freq. = Frequency \*Mat. = Material

<u>975</u>	<u>WSPA</u>	<u>-XX</u>
WR Size	Product Code	Thickness, mm

EIA WR	*Freq. (GHz)	P/N	Flange	*Mat.
WR975	0.75-1.12	975WSPA-XX	FDP9	Al
WR770	0.96-1.45	770WSPA-XX	FDP12	Al
WR650	1.12-1.70	650WSPA-XX	FDP14	Al
WR510	1.45-2.20	510WSPA-XX	FDP18	Al
WR430	1.70-2.60	430WSPA-XX	APF430	Al
WR340	2.20-3.30	340WSPA-XX	APF340	Al
WR284	2.60-3.95	284WSPA-XX	FDP32	Al
		284WSPA-XX_PB	APF284B	
WR229	3.30-4.90	229WSPA-XX	APF229	Al
WR187	3.95-5.85	187WSPA-XX	FDP48	Al
		187WSPA-XX_P0	APF187	
WR159	4.90-7.05	159WSPA-XX	APF159	Al
WR137	5.85-8.20	137WSPA-XX	FDP70	Al
		137WSPA-XX_P0	APF137	
WR112	7.05-10.0	112WSPA-XX	APF112B	Al
		112WSPA-XX_P0	APF112	
WR90	8.20-12.4	90WSPA-XX_Cu	APF90B	Cu
		90WSPA-XX_Cu_P0	APF90	
		90WSPA-XX_Cu_PA	APF90A	
WR75	10.0-15.0	75WSPA-XX_Cu	APF75B	Cu
WR62	12.4-18.0	62WSPA-XX_Cu	APF62	Cu
WR51	15.0-22.0	51WSPA-XX_Cu	APF51C	Cu
		51WSPA-XX_Cu_PA	APF51A	
		51WSPA-XX_Cu_PB	APF51B	
WR42	18.0-26.5	42WSPA-XX_Cu	APF42	Cu
WR34	22.0-33.0	34WSPA-XX_Cu	FBP260	Cu
		34WSPA-XX_Cu_P0	APF34	
WR28	26.5-40.0	28WSPA-XX_Cu	APF28	Cu

EIA WR	* Freq. (GHz)	P/N	Flange	* Mat.
WR22	33.0-50.0	22WSPA-XX_Cu	APF22	Cu
WR19	40.0-60.0	19WSPA-XX_Cu	APF19	Cu
WR15	50.0-75.0	15WSPA-XX_Cu	APF15	Cu
WR12	60.0-90.0	12WSPA-XX_Cu	APF12	Cu
WR10	75.0-110.0	10WSPA-XX_Cu	APF10	Cu

### Double Ridge WG Spacer - 1/4 Wavelength (Shim)



Ordering Information  
P/N :

<u>84</u>	<u>DRWSPA</u>	<u>14</u>
WR Size	Product Code	1/4 Wavelength

EIA WRD	Frequency (GHz)	1/4 DRWSPA (Shim)	Flange	Material
		P/N		
WRD84	0.84-2.0	84DRWSPA14	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWSPA14	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWSPA14	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWSPA14	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWSPA14_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWSPA14_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWSPA14_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWSPA14_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWSPA14_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWSPA14_Cu	FPWRD180C24	Cu

### Double Ridge WG Spacer - Customized (Shim)



Ordering Information

P/N :

<u>84</u>	<u>DRWSPA</u>	<u>XX</u>
WR Size	Product Code	Thickness, mm

EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	84DRWSPA-XX	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWSPA-XX	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWSPA-XX	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWSPA-XX	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWSPA-XX_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWSPA-XX_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWSPA-XX_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWSPA-XX_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWSPA-XX_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWSPA-XX_Cu	FPWRD180C24	Cu

### Waveguide VNA Calibration Kits - CLKA1 Kits Series



284CLKA1-NRFEF\_DP



90CLKA1-SRFEF\_PB



34CLKA1-KRFEF\_BP



28CLKA1-KRFEF\_P0

#### Features

- 0.75 to 110GHz
- WR975 Through WR10
- Fixed Load Calibration
- Support TRL and SSLT Calibration Method
- Keysight (Agilent), Anritsu and Rohde & Schwarz VNAs Supported

#### Description

The A-INFO CLKA1 Series Calibration Kits are waveguide kits designed to provide accurate TRL(Thru-Reflect-Line) calibration of VNA for measurement in rectangular waveguide from WR975 to WR10 (0.75 to 110GHz). CLKA1 Series Calibration Kits provide all the necessary components for an accurate TRL calibration. In addition to TRL calibration, CLKA1 Series can also make SSLT(Short-Short-Load-Thru) and offset load calibration. All kit components have both standard flange and precision flange(APF Series).

### Components included in CLKA1 Series Waveguide Calibration Kits

QTY	Description	Notes
2	WG to Coaxial Adapter	Refer below table for each WG band.
1	Precision fixed termination	-
1	1/4-λ Spacer (shim)	-
1	Fixed (reference plane) Short	-
1	Verification Standard***	Optional, not included in standard Model.
1~3	Screw Pack	Qty is depending on WG band.
1	Dowel Pack*	For APF flange only.
1	Hex Ball Driver	-
1	Calibration Software**	Optional, not included in standard Model.
1	Carrying Case	-

#### Notes:

\*Indexing refer Precision Flange (APF)

\*\*Calibration Software currently supports Keysight 872x Series, PNA Series, Anritsu and Rohde&Schwarz ZVx Series. Please ask A-INFO for more information when place order.

\*\*\* Verification Standard is suggested used for WR28, WR22, WR19, WR15, WR12, WR10 Calibration Kit.

#### Model Information

Example Part Number: 430 CLKA1 -XABAB \_DP

Waveguide Size: WR975 to WR10

Product Code, CLKA1 Series WG Calibration Kits

Test Port Adapter Connector Option:

**X:** Connector type, S for SMA; N for N type; 3.5 for 3.5mm, K for 2.92mm, 2.4 for 2.4mm, 1.85 for 1.85mm.

**A:** Type for WG to coaxial adapter, R for Right Angle, E for Endlunch.

**B:** Gender for each adapter, F for female, M for Male.

**For Example: -SRFEF**, **S** means the connector type of WG to coaxial adapters in Calibration Kits is SMA. **RF** means one adapter is **Right Angle** with **Female** connector, **EF** means another one is **Endlaunch** with **Female** connector.

**Order Kits with no Adapter Option:** use **-0**, For example 90CLKA1-0\_PB  
(Note: Each model listed below can offer **"-0"** option)

**Order Kits with Two WG/WG Test Port Adapters Option:** use **-1**  
(Note: No WG to Coaxial Adapter in **"-1"** option )

Flange Code, refer below model list table.



### Standard CLKA1 Series Waveguide Calibration Kits Model List

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR975	0.75-1.12	-	975CLKA1-NRFRF_DP	-	N type Female	FDP9
		-	975CLKA1-SRFRF_DP	-	SMA Female	FDP9
WR770	0.96-1.45	-	770CLKA1-NRFRF_DP	-	N type Female	FDP12
		-	770CLKA1-SRFRF_DP	-	SMA Female	FDP12
WR650	1.12-1.7	-	650CLKA1-NRFRF_DP	-	N type Female	FDP14
		-	650CLKA1-SRFRF_DP	-	SMA Female	FDP14
WR510	1.45-2.2	-	510CLKA1-NRFRF_DP	-	N type Female	FDP18
		-	510CLKA1-SRFRF_DP	-	SMA Female	FDP18
WR430	1.7-2.6	430CLKA1-NRFEF_P0	-	430CLKA1-NEFEF_P0	N type Female	APF430
		430CLKA1-SRFEF_P0	-	430CLKA1-SEFEF_P0	SMA Female	APF430
WR340	2.2-3.3	340CLKA1-NRFEF_P0	-	340CLKA1-NEFEF_P0	N type Female	APF340
		340CLKA1-SRFEF_P0	-	340CLKA1-SEFEF_P0	SMA Female	APF340
WR284	2.6-3.95	284CLKA1-NRFEF_DP	-	284CLKA1-NEFEF_DP	N type Female	FDP32
		284CLKA1-SRFEF_DP	-	284CLKA1-SEFEF_DP	SMA Female	FDP32
		284CLKA1-NRFEF_AP	284CLKA1-NRFRF_AP	284CLKA1-NEFEF_AP	N type Female	FAP32
		284CLKA1-SRFEF_AP	284CLKA1-SRFRF_AP	284CLKA1-SEFEF_AP	SMA Female	FAP32
		284CLKA1-NRFEF_PB	284CLKA1-NRFRF_PB	284CLKA1-NEFEF_PB	N type Female	APF284B
		284CLKA1-SRFEF_PB	284CLKA1-SRFRF_PB	284CLKA1-SEFEF_PB	SMA Female	APF284B
WR229	3.3-4.9	229CLKA1-SRFEF_DP	-	229CLKA1-SEFEF_DP	SMA Female	FDP40
		229CLKA1-NRFEF_DP	-	229CLKA1-NEFEF_DP	N type Female	FDP40
		229CLKA1-SRFEF_P0	-	229CLKA1-SEFEF_P0	SMA Female	APF229
		229CLKA1-NRFEF_P0	-	229CLKA1-NEFEF_P0	N type Female	APF229
WR187	3.95-5.85	187CLKA1-SRFEF_DP	187CLKA1-SRFRF_DP	187CLKA1-SEFEF_DP	SMA Female	FDP48
		-	187CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP48
		187CLKA1-NRFEF_DP	187CLKA1-NRFRF_DP	187CLKA1-NEFEF_DP	N type Female	FDP48
		-	187CLKA1-7RFRF_DP	-	7mm	FDP48
		187CLKA1-SRFEF_AP	187CLKA1-SRFRF_AP	187CLKA1-SEFEF_AP	SMA Female	FAP48
		-	187CLKA1-3.5RFRF_AP	-	3.5mm Female	FAP48
		187CLKA1-NRFEF_AP	-	187CLKA1-NEFEF_AP	N type Female	FAP48
		187CLKA1-SRFEF_P0	187CLKA1-SRFRF_P0	187CLKA1-SEFEF_P0	SMA Female	APF187
		-	187CLKA1-3.5RFRF_P0	-	3.5mm Female	APF187
187CLKA1-NRFEF_P0	-	187CLKA1-NEFEF_P0	N type Female	APF187		
WR159	4.90-7.05	159CLKA1-SRFEF_DP	159CLKA1-SRFRF_DP	159CLKA1-SEFEF_DP	SMA Female	FDP58
		-	159CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP58
		159CLKA1-NRFEF_DP	159CLKA1-NRFRF_DP	159CLKA1-NEFEF_DP	N type Female	FDP58
		-	159CLKA1-7RFRF_DP	-	7mm	FDP58
		159CLKA1-SRFEF_P0	159CLKA1-SRFRF_P0	159CLKA1-SEFEF_P0	SMA Female	APF159
		-	159CLKA1-3.5RFRF_P0	-	3.5mm Female	APF159
		159CLKA1-NRFEF_P0	159CLKA1-NRFRF_P0	159CLKA1-NEFEF_P0	N type Female	APF159
-	159CLKA1-7RFRF_P0	-	7mm	APF159		

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR137	5.85-8.20	137CLKA1-SRFEF_DP	137CLKA1-SRFRF_DP	137CLKA1-SEFEF_DP	SMA Female	FDP70
		-	137CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP70
		137CLKA1-NRFEF_DP	137CLKA1-NRFRF_DP	137CLKA1-NEFEF_DP	N type Female	FDP70
		-	137CLKA1-7RFRF_DP	-	7mm	FDP70
		137CLKA1-SRFEF_AP	137CLKA1-SRFRF_AP	137CLKA1-SEFEF_AP	SMA Female	FAP70
		-	137CLKA1-3.5RFRF_AP	-	3.5mm Female	FAP70
		137CLKA1-NRFEF_AP	-	137CLKA1-NEFEF_AP	N type Female	FAP70
		137CLKA1-SRFEF_P0	137CLKA1-SRFRF_P0	137CLKA1-SEFEF_P0	SMA Female	APF137
		-	137CLKA1-3.5RFRF_P0	-	3.5mm Female	APF137
		137CLKA1-NRFEF_P0	-	137CLKA1-NEFEF_P0	N type Female	APF137
WR112	7.05-10.0	112CLKA1-SRFEF_PB	112CLKA1-SRFRF_PB	112CLKA1-SEFEF_PB	SMA Female	APF112B
		-	112CLKA1-3.5RFRF_PB	-	3.5mm Female	APF112B
		112CLKA1-NRFEF_PB	112CLKA1-NRFRF_PB	112CLKA1-NEFEF_PB	N type Female	APF112B
		-	112CLKA1-7RFRF_PB	-	7mm	APF112B
		112CLKA1-SRFEF_DP	112CLKA1-SRFRF_DP	112CLKA1-SEFEF_DP	SMA Female	FDP84
		-	112CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP84
		112CLKA1-NRFEF_DP	-	112CLKA1-NEFEF_DP	N type Female	FDP84
		112CLKA1-SRFEF_P0	112CLKA1-SRFRF_P0	112CLKA1-SEFEF_P0	SMA Female	APF112
		-	112CLKA1-3.5RFRF_P0	-	3.5mm Female	APF112
		112CLKA1-NRFEF_P0	-	112CLKA1-NEFEF_P0	N type Female	APF112
WR90	8.2-12.4	90CLKA1-SRFEF_PB	90CLKA1-SRFRF_PB	90CLKA1-SEFEF_PB	SMA Female	APF90B
		-	90CLKA1-3.5RFRF_PB	-	3.5mm Female	APF90B
		90CLKA1-NRFEF_PB	90CLKA1-NRFRF_PB	90CLKA1-NEFEF_PB	N type Female	APF90B
		-	90CLKA1-7RFRF_PB	-	7mm	APF90B
		90CLKA1-SRFEF_DP	-	90CLKA1-SEFEF_DP	SMA Female	FDP100
		90CLKA1-NRFEF_DP	-	90CLKA1-NEFEF_DP	N type Female	FDP100
		90CLKA1-SRFEF_P0	-	90CLKA1-SEFEF_P0	SMA Female	APF90
		90CLKA1-NRFEF_P0	-	90CLKA1-NEFEF_P0	N type Female	APF90
		90CLKA1-SRFEF_PA	-	90CLKA1-SEFEF_PA	SMA Female	APF90A
		90CLKA1-NRFEF_PA	-	90CLKA1-NEFEF_PA	N type Female	APF90A
WR75	10.0-15.0	75CLKA1-SRFEF_PB	75CLKA1-SRFRF_PB	75CLKA1-SEFEF_PB	SMA Female	APF75B
		-	75CLKA1-3.5RFRF_PB	-	3.5mm Female	APF75B
		75CLKA1-NRFEF_PB	75CLKA1-NRFRF_PB	75CLKA1-NEFEF_PB	N type Female	APF75B
		-	75CLKA1-7RFRF_PB	-	7mm	APF75B
		75CLKA1-SRFEF_DP	-	75CLKA1-SEFEF_DP	SMA Female	FDP120
		75CLKA1-NRFEF_DP	-	75CLKA1-NEFEF_DP	N type Female	FDP120
WR62	12.4-18.0	62CLKA1-SRFEF_P0	62CLKA1-SRFRF_P0	62CLKA1-SEFEF_P0	SMA Female	APF62
		-	62CLKA1-3.5RFRF_P0	-	3.5mm Female	APF62
		62CLKA1-NRFEF_P0	62CLKA1-NRFRF_P0	62CLKA1-NEFEF_P0	N type Female	APF62
		-	62CLKA1-7RFRF_P0	-	7mm	APF62
		62CLKA1-SRFEF_DP	-	62CLKA1-SEFEF_DP	SMA Female	FDP140
		62CLKA1-NRFEF_DP	-	62CLKA1-NEFEF_DP	N type Female	FDP140
WR51	15.0-22.0	51CLKA1-SRFEF_PC	51CLKA1-SRFRF_PC	51CLKA1-SEFEF_PC	SMA Female	APF51C
		51CLKA1-SRFEF_PA	51CLKA1-SRFRF_PA	51CLKA1-SEFEF_PA	SMA Female	APF51A
		51CLKA1-SRFEF_PB	51CLKA1-SRFRF_PB	51CLKA1-SEFEF_PB	SMA Female	APF51B
		51CLKA1-SRFEF_DP	-	51CLKA1-SEFEF_DP	SMA Female	FDP180

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR42	18.0-26.5	42CLKA1-SRFEF_P0	-	42CLKA1-SEFEF_P0	SMA Female	APF42
		42CLKA1-KRFEF_P0	-	42CLKA1-KEFEF_P0	2.92mm Female	APF42
		-	42CLKA1-3.5RFRF_P0	-	3.5mm Female	APF42
WR34	22.0-33.0	34CLKA1-KRFEF_BP	34CLKA1-KRFRF_BP	34CLKA1-KEFEF_BP	2.92mm Female	FBP260
		34CLKA1-KRFEF_P0	34CLKA1-KRFRF_P0	34CLKA1-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKA1-KRFEF_P0	-	28CLKA1-KEFEF_P0	2.92mm Female	APF28
		28CLKA1-2.4RFEF_P0	-	28CLKA1-2.4EFEF_P0	2.4mm Female	APF28
		28CLKA1-1_P0	-	-	-	APF28
WR22	33.0-50.0	22CLKA1-2.4RFEF_UP	-	22CLKA1-2.4EFEF_UP	2.4mm Female	FUGP400
		22CLKA1-2.4RFEF_P0	-	22CLKA1-2.4EFEF_P0	2.4mm Female	APF22
		22CLKA1-1_P0	-	-	-	APF22
WR19	40.0-50.0	19CLKA1-2.4RFEF_UP	-	19CLKA1-2.4EFEF_UP	2.4mm Female	FUGP500
	40.0-60.0	19CLKA1-1.85RFEF_UP	-	19CLKA1-1.85EFEF_UP	1.85mm Female	FUGP500
	40.0-60.0	19CLKA1-1_UP	-	-	-	FUGP500
	40.0-50.0	19CLKA1-2.4RFEF_P0	-	19CLKA1-2.4EFEF_UP	2.4mm Female	APF19
	40.0-60.0	19CLKA1-1.85RFEF_P0	-	19CLKA1-1.85EFEF_P0	1.85mm Female	APF19
	40.0-60.0	19CLKA1-1_P0	-	-	-	APF19
WR15	50.0-65.0	15CLKA1-1.85RFEF_UP	-	15CLKA1-1.85EFEF_UP	1.85mm Female	FUGP620
	50.0-75.0	15CLKA1-1_UP	-	-	-	FUGP620
	50.0-65.0	15CLKA1-1.85RFEF_P0	-	15CLKA1-1.85EFEF_P0	1.85mm Female	APF15
	50.0-75.0	15CLKA1-1_P0	-	-	-	APF15
WR12	60.0-90.0	12CLKA1-0_UP	-	-	-	FUGP740
		12CLKA1-1_UP	-	-	-	FUGP740
		12CLKA1-0_P0	-	-	-	APF12
		12CLKA1-1_P0	-	-	-	APF12
WR10	75.0-110.0	10CLKA1-0_UP	-	-	-	FUGP900
		10CLKA1-1_UP	-	-	-	FUGP900
		10CLKA1-0_P0	-	-	-	APF10
		10CLKA1-1_P0	-	-	-	APF10

### Flange Description

Below flanges are available for WG Calibration Kits

- Standard Flange
- Precision Flange (APF)

The AINFO Precision Flanges(APF) on these components have precision indexing holes and indexing pins for precise mating alignment that maximizes measurement repeatability. They conform to all EIA WR standards for rectangular or round waveguide flanges.

### Waveguide VNA Calibration Kits - CLKA2 Kits Series



284CLKA2-NRFRF\_P0



90CLKA2-SRFRF\_PB



42CLKA2-SRFRF\_P0



28CLKA2-KRFRF\_P0

#### Features

- Two Precision Fixed Loads
- 0.75 to 110GHz
- WR975 Through WR10
- Fixed Load Calibration
- Support TRL and SSLT Calibration Method
- Keysight (Agilent), Anritsu and Rohde & Schwarz VNAs Supported

#### Description

The A-INFO CLKA2 Series Calibration Kits are waveguide kits designed to provide accurate TRL(Thru-Reflect-Line) calibration of VNA for measurement in rectangular waveguide from WR975 to WR10 (0.75 to 110GHz). CLKA2 Series Calibration Kits provide all the necessary components for an accurate TRL calibration. In addition to TRL calibration, CLKA2 Series can also make SSLT(Short-Short-Load-Thru) and offset load calibration. All kit components have both standard flange and precision flange(APF Series).

### Components included in CLKA2 Series Waveguide Calibration Kits

QTY	Description	Notes
2	WG to Coaxial Adapter	Refer below table for each WG band.
2	Precision fixed termination	Two terminations for CLKA2 series.
1	1/4-λ Spacer (shim)	-
1	Fixed (reference plane) Short	-
1	Verification Standard***	Optional, not included in standard Model.
1~3	Screw Pack	Qty is depending on WG band.
1	Dowel Pack*	For APF flange only.
1	Hex Ball Driver	-
1	Calibration Software**	Optional, not included in standard Model.
1	Carrying Case	-

#### Notes:

\*Indexing refer Precision Flange (APF)

\*\*Calibration Software currently supports Keysight 872x Series, PNA Series, Anritsu and Rohde&Schwarz ZVx Series. Please ask A-INFO for more information when place order.

\*\*\* Verification Standard is suggested used for WR28, WR22, WR19, WR15, WR12, WR10 Calibration Kit.

#### Model Information

Example Part Number: 430 CLKA2 -XABAB \_DP

Waveguide Size: WR975 to WR10

Product Code, CLKA2 Series WG Calibration Kits

Test Port Adapter Connector Option:

**X:** Connector type, S for SMA; N for N type; 3.5 for 3.5mm, K for 2.92mm, 2.4 for 2.4mm, 1.85 for 1.85mm.

**A:** Type for WG to coaxial adapter, R for Right Angle, E for Endlunch.

**B:** Gender for each adapter, F for female, M for Male.

**For Example: -SRFEF**, **S** means the connector type of WG to coaxial adapters in Calibration Kits is SMA. **RF** means one adapter is Right Angle with Female connector, **EF** means another one is Endlaunch with Female connector.

**Order Kits with no Adapter Option:** use **-0**, For example 90CLKA1-0\_PB (Note: Each model listed below can offer "-0" option)

**Order Kits with Two WG/WG Test Port Adapters Option:** use **-1** (Note: No WG to Coaxial Adapter in "-1" option )

Flange Code, refer below model list table.

### Standard CLKA2 Series Waveguide Calibration Kits Model List

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR975	0.75-1.12	-	975CLKA2-NRFRF_DP	-	N type Female	FDP9
		-	975CLKA2-SRFRF_DP	-	SMA Female	FDP9
WR770	0.96-1.45	-	770CLKA2-NRFRF_DP	-	N type Female	FDP12
		-	770CLKA2-SRFRF_DP	-	SMA Female	FDP12
WR650	1.12-1.7	-	650CLKA2-NRFRF_DP	-	N type Female	FDP14
		-	650CLKA2-SRFRF_DP	-	SMA Female	FDP14
WR510	1.45-2.2	-	510CLKA2-NRFRF_DP	-	N type Female	FDP18
		-	510CLKA2-SRFRF_DP	-	SMA Female	FDP18
WR430	1.7-2.6	430CLKA2-NRFEF_P0	-	430CLKA2-NEFEF_P0	N type Female	APF430
		430CLKA2-SRFEF_P0	-	430CLKA2-SEFEF_P0	SMA Female	APF430
WR340	2.2-3.3	340CLKA2-NRFEF_P0	-	340CLKA2-NEFEF_P0	N type Female	APF340
		340CLKA2-SRFEF_P0	-	340CLKA2-SEFEF_P0	SMA Female	APF340
WR284	2.6-3.95	284CLKA2-NRFEF_DP	-	284CLKA2-NEFEF_DP	N type Female	FDP32
		284CLKA2-SRFEF_DP	-	284CLKA2-SEFEF_DP	SMA Female	FDP32
		284CLKA2-NRFEF_AP	284CLKA2-NRFRF_AP	284CLKA2-NEFEF_AP	N type Female	FAP32
		284CLKA2-SRFEF_AP	284CLKA2-SRFRF_AP	284CLKA2-SEFEF_AP	SMA Female	FAP32
		284CLKA2-NRFEF_PB	284CLKA2-NRFRF_PB	284CLKA2-NEFEF_PB	N type Female	APF284B
		284CLKA2-SRFEF_PB	284CLKA2-SRFRF_PB	284CLKA2-SEFEF_PB	SMA Female	APF284B
WR229	3.3-4.9	229CLKA2-SRFEF_DP	-	229CLKA2-SEFEF_DP	SMA Female	FDP40
		229CLKA2-NRFEF_DP	-	229CLKA2-NEFEF_DP	N type Female	FDP40
		229CLKA2-SRFEF_P0	-	229CLKA2-SEFEF_P0	SMA Female	APF229
		229CLKA2-NRFEF_P0	-	229CLKA2-NEFEF_P0	N type Female	APF229
WR187	3.95-5.85	187CLKA2-SRFEF_DP	187CLKA2-SRFRF_DP	187CLKA2-SEFEF_DP	SMA Female	FDP48
		-	187CLKA2-3.5RFRF_DP	-	3.5mm Female	FDP48
		187CLKA2-NRFEF_DP	187CLKA2-NRFRF_DP	187CLKA2-NEFEF_DP	N type Female	FDP48
		-	187CLKA2-7RFRF_DP	-	7mm	FDP48
		187CLKA2-SRFEF_AP	187CLKA2-SRFRF_AP	187CLKA2-SEFEF_AP	SMA Female	FAP48
		-	187CLKA2-3.5RFRF_AP	-	3.5mm Female	FAP48
		187CLKA2-NRFEF_AP	-	187CLKA2-NEFEF_AP	N type Female	FAP48
		187CLKA2-SRFEF_P0	187CLKA2-SRFRF_P0	187CLKA2-SEFEF_P0	SMA Female	APF187
		-	187CLKA2-3.5RFRF_P0	-	3.5mm Female	APF187
187CLKA2-NRFEF_P0	-	187CLKA2-NEFEF_P0	N type Female	APF187		
WR159	4.90-7.05	159CLKA2-SRFEF_DP	159CLKA2-SRFRF_DP	159CLKA2-SEFEF_DP	SMA Female	FDP58
		-	159CLKA2-3.5RFRF_DP	-	3.5mm Female	FDP58
		159CLKA2-NRFEF_DP	159CLKA2-NRFRF_DP	159CLKA2-NEFEF_DP	N type Female	FDP58
		-	159CLKA2-7RFRF_DP	-	7mm	FDP58
		159CLKA2-SRFEF_P0	159CLKA2-SRFRF_P0	159CLKA2-SEFEF_P0	SMA Female	APF159
		-	159CLKA2-3.5RFRF_P0	-	3.5mm Female	APF159
		159CLKA2-NRFEF_P0	159CLKA2-NRFRF_P0	159CLKA2-NEFEF_P0	N type Female	APF159
-	159CLKA2-7RFRF_P0	-	7mm	APF159		

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR137	5.85-8.20	137CLKA2-SRFEF_DP	137CLKA2-SRFRF_DP	137CLKA2-SEFEF_DP	SMA Female	FDP70
		-	137CLKA2-3.5RFRF_DP	-	3.5mm Female	FDP70
		137CLKA2-NRFEF_DP	137CLKA2-NRFRF_DP	137CLKA2-NEFEF_DP	N type Female	FDP70
		-	137CLKA2-7RFRF_DP	-	7mm	FDP70
		137CLKA2-SRFEF_AP	137CLKA2-SRFRF_AP	137CLKA2-SEFEF_AP	SMA Female	FAP70
		-	137CLKA2-3.5RFRF_AP	-	3.5mm Female	FAP70
		137CLKA2-NRFEF_AP	-	137CLKA2-NEFEF_AP	N type Female	FAP70
		137CLKA2-SRFEF_P0	137CLKA2-SRFRF_P0	137CLKA2-SEFEF_P0	SMA Female	APF137
		-	137CLKA2-3.5RFRF_P0	-	3.5mm Female	APF137
		137CLKA2-NRFEF_P0	-	137CLKA2-NEFEF_P0	N type Female	APF137
WR112	7.05-10.0	112CLKA2-SRFEF_PB	112CLKA2-SRFRF_PB	112CLKA2-SEFEF_PB	SMA Female	APF112B
		-	112CLKA2-3.5RFRF_PB	-	3.5mm Female	APF112B
		112CLKA2-NRFEF_PB	112CLKA2-NRFRF_PB	112CLKA2-NEFEF_PB	N type Female	APF112B
		-	112CLKA2-7RFRF_PB	-	7mm	APF112B
		112CLKA2-SRFEF_DP	112CLKA2-SRFRF_DP	112CLKA2-SEFEF_DP	SMA Female	FDP84
		-	112CLKA2-3.5RFRF_DP	-	3.5mm Female	FDP84
		112CLKA2-NRFEF_DP	-	112CLKA2-NEFEF_DP	N type Female	FDP84
		112CLKA2-SRFEF_P0	112CLKA2-SRFRF_P0	112CLKA2-SEFEF_P0	SMA Female	APF112
		-	112CLKA2-3.5RFRF_P0	-	3.5mm Female	APF112
		112CLKA2-NRFEF_P0	-	112CLKA2-NEFEF_P0	N type Female	APF112
WR90	8.2-12.4	90CLKA2-SRFEF_PB	90CLKA2-SRFRF_PB	90CLKA2-SEFEF_PB	SMA Female	APF90B
		-	90CLKA2-3.5RFRF_PB	-	3.5mm Female	APF90B
		90CLKA2-NRFEF_PB	90CLKA2-NRFRF_PB	90CLKA2-NEFEF_PB	N type Female	APF90B
		-	90CLKA2-7RFRF_PB	-	7mm	APF90B
		90CLKA2-SRFEF_DP	-	90CLKA2-SEFEF_DP	SMA Female	FDP100
		90CLKA2-NRFEF_DP	-	90CLKA2-NEFEF_DP	N type Female	FDP100
		90CLKA2-SRFEF_P0	-	90CLKA2-SEFEF_P0	SMA Female	APF90
		90CLKA2-NRFEF_P0	-	90CLKA2-NEFEF_P0	N type Female	APF90
		90CLKA2-SRFEF_PA	-	90CLKA2-SEFEF_PA	SMA Female	APF90A
		90CLKA2-NRFEF_PA	-	90CLKA2-NEFEF_PA	N type Female	APF90A
WR75	10.0-15.0	75CLKA2-SRFEF_PB	75CLKA2-SRFRF_PB	75CLKA2-SEFEF_PB	SMA Female	APF75B
		-	75CLKA2-3.5RFRF_PB	-	3.5mm Female	APF75B
		75CLKA2-NRFEF_PB	75CLKA2-NRFRF_PB	75CLKA2-NEFEF_PB	N type Female	APF75B
		-	75CLKA2-7RFRF_PB	-	7mm	APF75B
		75CLKA2-SRFEF_DP	-	75CLKA2-SEFEF_DP	SMA Female	FDP120
		75CLKA2-NRFEF_DP	-	75CLKA2-NEFEF_DP	N type Female	FDP120
WR62	12.4-18.0	62CLKA2-SRFEF_P0	62CLKA2-SRFRF_P0	62CLKA2-SEFEF_P0	SMA Female	APF62
		-	62CLKA2-3.5RFRF_P0	-	3.5mm Female	APF62
		62CLKA2-NRFEF_P0	62CLKA2-NRFRF_P0	62CLKA2-NEFEF_P0	N type Female	APF62
		-	62CLKA2-7RFRF_P0	-	7mm	APF62
		62CLKA2-SRFEF_DP	-	62CLKA2-SEFEF_DP	SMA Female	FDP140
		62CLKA2-NRFEF_DP	-	62CLKA2-NEFEF_DP	N type Female	FDP140

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR51	15.0-22.0	51CLKA2-SRFEF_PC	51CLKA2-SRFRF_PC	51CLKA2-SEFEF_PC	SMA Female	APF51C
		51CLKA2-SRFEF_PA	51CLKA2-SRFRF_PA	51CLKA2-SEFEF_PA	SMA Female	APF51A
		51CLKA2-SRFEF_PB	51CLKA2-SRFRF_PB	51CLKA2-SEFEF_PB	SMA Female	APF51B
		51CLKA2-SRFEF_DP	-	51CLKA2-SEFEF_DP	SMA Female	FDP180
WR42	18.0-26.5	42CLKA2-SRFEF_P0	42CLKA2-SRFRF_P0	42CLKA2-SEFEF_P0	SMA Female	APF42
		42CLKA2-KRFEF_P0	42CLKA2-KRFRF_P0	42CLKA2-KEFEF_P0	2.92mm Female	APF42
		-	42CLKA2-3.5RFRF_P0	-	3.5mm Female	APF42
WR34	22.0-33.0	34CLKA2-KRFEF_BP	34CLKA2-KRFRF_BP	34CLKA2-KEFEF_BP	2.92mm Female	FBP260
		34CLKA2-KRFEF_P0	34CLKA2-KRFRF_P0	34CLKA2-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKA2-KRFEF_P0	28CLKA2-KRFRF_P0	28CLKA2-KEFEF_P0	2.92mm Female	APF28
		28CLKA2-2.4RFEF_P0	28CLKA2-2.4RFRF_P0	28CLKA2-2.4EFEF_P0	2.4mm Female	APF28
		28CLKA2-1_P0	-	-	-	APF28
WR22	33.0-50.0	22CLKA2-2.4RFEF_UP	-	22CLKA2-2.4EFEF_UP	2.4mm Female	FUGP400
		22CLKA2-2.4RFEF_P0	22CLKA2-2.4RFRF_P0	22CLKA2-2.4EFEF_P0	2.4mm Female	APF22
		22CLKA2-1_P0	-	-	-	APF22
WR19	40.0-50.0	19CLKA2-2.4RFEF_UP	-	19CLKA2-2.4EFEF_UP	2.4mm Female	FUGP500
	40.0-60.0	19CLKA2-1.85RFEF_UP	-	19CLKA2-1.85EFEF_UP	1.85mm Female	FUGP500
	40.0-60.0	19CLKA2-1_UP	-	-	-	FUGP500
	40.0-50.0	19CLKA2-2.4RFEF_P0	19CLKA2-2.4RFRF_P0	19CLKA2-2.4EFEF_UP	2.4mm Female	APF19
	40.0-60.0	19CLKA2-1.85RFEF_P0	19CLKA2-1.85RFRF_P0	19CLKA2-1.85EFEF_P0	1.85mm Female	APF19
	40.0-60.0	19CLKA2-1_P0	-	-	-	APF19
WR15	50.0-65.0	15CLKA2-1.85RFEF_UP	-	15CLKA2-1.85EFEF_UP	1.85mm Female	FUGP620
	50.0-75.0	15CLKA2-1_UP	-	-	-	FUGP620
	50.0-65.0	15CLKA2-1.85RFEF_P0	15CLKA2-1.85RFRF_P0	15CLKA2-1.85EFEF_P0	1.85mm Female	APF15
	50.0-75.0	15CLKA2-1_P0	-	-	-	APF15
WR12	60.0-90.0	12CLKA2-0_UP	-	-	-	FUGP740
		12CLKA2-1_UP	-	-	-	FUGP740
		12CLKA2-0_P0	-	-	-	APF12
		12CLKA2-1_P0	-	-	-	APF12
WR10	75.0-110.0	10CLKA2-0_UP	-	-	-	FUGP900
		10CLKA2-1_UP	-	-	-	FUGP900
		10CLKA2-0_P0	-	-	-	APF10
		10CLKA2-1_P0	-	-	-	APF10

### Flange Description

Below flanges are available for WG Calibration Kits

- Standard Flange
- Precision Flange (APF)

The AINFO Precision Flanges(APF) on these components have precision indexing holes and indexing pins for precise mating alignment that maximizes measurement repeatability. They conform to all EIA WR standards for rectangular or round waveguide flanges.



## Waveguide VNA Calibration Kits - CLKA5 Kits Series



28CLKA5-KRFRF\_P0

### Features

- 1.7 to 40GHz
- WR430 Through WR28
- Sliding Load Calibration
- Support SSLT and SSL Calibration Method
- Keysight (Agilent), Anritsu and Rohde & Schwarz VNAs Supported

### Description

The A-INFO CLKA5 Series Calibration Kits are waveguide kits designed to provide accurate SSLT(Short-Short-Load-Thru) calibration of VNA for measurement in rectangular waveguide from WR430 to WR28 (1.7 to 40GHz). CLKA5 Series Calibration Kits provide all the necessary components for an accurate SSLT calibration. In addition to SSLT calibration, CLKA5 Series can also make one-port SSL(Short-Short-Load) calibrations. All kit components have both standard flange and precision flange(APF Series).

### Components included in CLKA5 Series Waveguide Calibration Kits

QTY	Description	Notes
2	WG to Coaxial Adapter	Refer below table for each WG band.
1	Precision Sliding Termination	-
1	1/4-λ Spacer (shim)	-
1	Fixed (reference plane) Short	-
1	Verification Standard***	Optional, not included in standard Model.
1~3	Screw Pack	Qty is depending on WG band.
1	Dowel Pack*	For APF flange only.
1	Hex Ball Driver	-
1	Calibration Software**	Optional, not included in standard Model.
1	Carrying Case	-

#### Notes:

\*Indexing refer Precision Flange (APF)

\*\*Calibration Software currently supports Keysight 872x Series, PNA Series, Anritsu and Rohde&Schwarz ZVx Series. Please ask A-INFO for more information when place order.

\*\*\* Verification Standard is suggested used for WR28 Calibration Kit.

#### Model Information

Example Part Number: **284** CLKA5 **-XABAB** \_DP

Waveguide Size: WR430 to WR28

Product Code, CLKA5 Series WG Calibration Kits

Test Port Adapter Connector Option:

**X:** Connector type, S for SMA; N for N type; 3.5 for 3.5mm, K for 2.92mm, 2.4 for 2.4mm, 1.85 for 1.85mm.

**A:** Type for WG to coaxial adapter, R for Right Angle, E for Endlunch.

**B:** Gender for each adapter, F for female, M for Male.

**For Example: -SRFEF**, **S** means the connector type of WG to coaxial adapters in Calibration Kits is SMA. **RF** means one adapter is **R**ight Angle with **F**emale connector, **EF** means another one is **E**ndlaunch with **F**emale connector.

**Order Kits with no Adapter Option:** use **-0**, For example 90CLKA5-0\_PB  
(Note: Each model listed below can offer "**-0**" option)

**Order Kits with Two WG/WG Test Port Adapters Option:** use **-1**  
(Note: No WG to Coaxial Adapter in "**-1**" option )

Flange Code, refer below model list table.

### Standard CLKA5 Series Waveguide Calibration Kits Model List

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR430	1.7-2.6	430CLKA5-NRFEF_P0	-	430CLKA5-NEFEF_P0	N type Female	APF430
		430CLKA5-SRFEF_P0	-	430CLKA5-SEFEF_P0	SMA Female	APF430
WR340	2.2-3.3	340CLKA5-NRFEF_P0	-	340CLKA5-NEFEF_P0	N type Female	APF340
		340CLKA5-SRFEF_P0	-	340CLKA5-SEFEF_P0	SMA Female	APF340
WR284	2.6-3.95	284CLKA5-NRFEF_DP	-	284CLKA5-NEFEF_DP	N type Female	FDP32
		284CLKA5-SRFEF_DP	-	284CLKA5-SEFEF_DP	SMA Female	FDP32
		284CLKA5-NRFEF_AP	284CLKA5-NRFRF_AP	284CLKA5-NEFEF_AP	N type Female	FAP32
		284CLKA5-SRFEF_AP	284CLKA5-SRFRF_AP	284CLKA5-SEFEF_AP	SMA Female	FAP32
		284CLKA5-NRFEF_PB	284CLKA5-NRFRF_PB	284CLKA5-NEFEF_PB	N type Female	APF284B
		284CLKA5-SRFEF_PB	284CLKA5-SRFRF_PB	284CLKA5-SEFEF_PB	SMA Female	APF284B
WR229	3.3-4.9	229CLKA5-SRFEF_DP	-	229CLKA5-SEFEF_DP	SMA Female	FDP40
		229CLKA5-NRFEF_DP	-	229CLKA5-NEFEF_DP	N type Female	FDP40
		229CLKA5-SRFEF_P0	-	229CLKA5-SEFEF_P0	SMA Female	APF229
		229CLKA5-NRFEF_P0	-	229CLKA5-NEFEF_P0	N type Female	APF229
WR187	3.95-5.85	187CLKA5-SRFEF_DP	187CLKA5-SRFRF_DP	187CLKA5-SEFEF_DP	SMA Female	FDP48
		-	187CLKA5-3.5RFRF_DP	-	3.5mm Female	FDP48
		187CLKA5-NRFEF_DP	187CLKA5-NRFRF_DP	187CLKA5-NEFEF_DP	N type Female	FDP48
		-	187CLKA5-7RFRF_DP	-	7mm	FDP48
		187CLKA5-SRFEF_AP	187CLKA5-SRFRF_AP	187CLKA5-SEFEF_AP	SMA Female	FAP48
		-	187CLKA5-3.5RFRF_AP	-	3.5mm Female	FAP48
		187CLKA5-NRFEF_AP	-	187CLKA5-NEFEF_AP	N type Female	FAP48
		187CLKA5-SRFEF_P0	187CLKA5-SRFRF_P0	187CLKA5-SEFEF_P0	SMA Female	APF187
		-	187CLKA5-3.5RFRF_P0	-	3.5mm Female	APF187
187CLKA5-NRFEF_P0	-	187CLKA5-NEFEF_P0	N type Female	APF187		
WR159	4.90-7.05	159CLKA5-SRFEF_DP	159CLKA5-SRFRF_DP	159CLKA5-SEFEF_DP	SMA Female	FDP58
		-	159CLKA5-3.5RFRF_DP	-	3.5mm Female	FDP58
		159CLKA5-NRFEF_DP	159CLKA5-NRFRF_DP	159CLKA5-NEFEF_DP	N type Female	FDP58
		-	159CLKA5-7RFRF_DP	-	7mm	FDP58
		159CLKA5-SRFEF_P0	159CLKA5-SRFRF_P0	159CLKA5-SEFEF_P0	SMA Female	APF159
		-	159CLKA5-3.5RFRF_P0	-	3.5mm Female	APF159
		159CLKA5-NRFEF_P0	159CLKA5-NRFRF_P0	159CLKA5-NEFEF_P0	N type Female	APF159
-	159CLKA5-7RFRF_P0	-	7mm	APF159		
WR137	5.85-8.20	137CLKA5-SRFEF_DP	137CLKA5-SRFRF_DP	137CLKA5-SEFEF_DP	SMA Female	FDP70
		-	137CLKA5-3.5RFRF_DP	-	3.5mm Female	FDP70
		137CLKA5-NRFEF_DP	137CLKA5-NRFRF_DP	137CLKA5-NEFEF_DP	N type Female	FDP70
		-	137CLKA5-7RFRF_DP	-	7mm	FDP70
		137CLKA5-SRFEF_AP	137CLKA5-SRFRF_AP	137CLKA5-SEFEF_AP	SMA Female	FAP70
		-	137CLKA5-3.5RFRF_AP	-	3.5mm Female	FAP70
		137CLKA5-NRFEF_AP	-	137CLKA5-NEFEF_AP	N type Female	FAP70
		137CLKA5-SRFEF_P0	137CLKA5-SRFRF_P0	137CLKA5-SEFEF_P0	SMA Female	APF137
		-	137CLKA5-3.5RFRF_P0	-	3.5mm Female	APF137
137CLKA5-NRFEF_P0	-	137CLKA5-NEFEF_P0	N type Female	APF137		

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR112	7.05-10.0	112CLKA5-SRFEF_PB	112CLKA5-SRFRF_PB	112CLKA5-SEFEF_PB	SMA Female	APF112B
		-	112CLKA5-3.5RFRF_PB	-	3.5mm Female	APF112B
		112CLKA5-NRFEF_PB	112CLKA5-NRFRF_PB	112CLKA5-NEFEF_PB	N type Female	APF112B
		-	112CLKA5-7RFRF_PB	-	7mm	APF112B
		112CLKA5-SRFEF_DP	112CLKA5-SRFRF_DP	112CLKA5-SEFEF_DP	SMA Female	FDP84
		-	112CLKA5-3.5RFRF_DP	-	3.5mm Female	FDP84
		112CLKA5-NRFEF_DP	-	112CLKA5-NEFEF_DP	N type Female	FDP84
		112CLKA5-SRFEF_P0	112CLKA5-SRFRF_P0	112CLKA5-SEFEF_P0	SMA Female	APF112
		-	112CLKA5-3.5RFRF_P0	-	3.5mm Female	APF112
		112CLKA5-NRFEF_P0	-	112CLKA5-NEFEF_P0	N type Female	APF112
WR90	8.2-12.4	90CLKA5-SRFEF_PB	90CLKA5-SRFRF_PB	90CLKA5-SEFEF_PB	SMA Female	APF90B
		-	90CLKA5-3.5RFRF_PB	-	3.5mm Female	APF90B
		90CLKA5-NRFEF_PB	90CLKA5-NRFRF_PB	90CLKA5-NEFEF_PB	N type Female	APF90B
		-	90CLKA5-7RFRF_PB	-	7mm	APF90B
		90CLKA5-SRFEF_DP	-	90CLKA5-SEFEF_DP	SMA Female	FDP100
		90CLKA5-NRFEF_DP	-	90CLKA5-NEFEF_DP	N type Female	FDP100
		90CLKA5-SRFEF_P0	-	90CLKA5-SEFEF_P0	SMA Female	APF90
		90CLKA5-NRFEF_P0	-	90CLKA5-NEFEF_P0	N type Female	APF90
		90CLKA5-SRFEF_PA	-	90CLKA5-SEFEF_PA	SMA Female	APF90A
90CLKA5-NRFEF_PA	-	90CLKA5-NEFEF_PA	N type Female	APF90A		
WR75	10.0-15.0	75CLKA5-SRFEF_PB	75CLKA5-SRFRF_PB	75CLKA5-SEFEF_PB	SMA Female	APF75B
		-	75CLKA5-3.5RFRF_PB	-	3.5mm Female	APF75B
		75CLKA5-NRFEF_PB	75CLKA5-NRFRF_PB	75CLKA5-NEFEF_PB	N type Female	APF75B
		-	75CLKA5-7RFRF_PB	-	7mm	APF75B
		75CLKA5-SRFEF_DP	-	75CLKA5-SEFEF_DP	SMA Female	FDP120
		75CLKA5-NRFEF_DP	-	75CLKA5-NEFEF_DP	N type Female	FDP120
WR62	12.4-18.0	62CLKA5-SRFEF_P0	62CLKA5-SRFRF_P0	62CLKA5-SEFEF_P0	SMA Female	APF62
		-	62CLKA5-3.5RFRF_P0	-	3.5mm Female	APF62
		62CLKA5-NRFEF_P0	62CLKA5-NRFRF_P0	62CLKA5-NEFEF_P0	N type Female	APF62
		-	62CLKA5-7RFRF_P0	-	7mm	APF62
		62CLKA5-SRFEF_DP	-	62CLKA5-SEFEF_DP	SMA Female	FDP140
		62CLKA5-NRFEF_DP	-	62CLKA5-NEFEF_DP	N type Female	FDP140
WR51	15.0-22.0	51CLKA5-SRFEF_PC	51CLKA5-SRFRF_PC	51CLKA5-SEFEF_PC	SMA Female	APF51C
		51CLKA5-SRFEF_PA	51CLKA5-SRFRF_PA	51CLKA5-SEFEF_PA	SMA Female	APF51A
		51CLKA5-SRFEF_PB	51CLKA5-SRFRF_PB	51CLKA5-SEFEF_PB	SMA Female	APF51B
		51CLKA5-SRFEF_DP	-	51CLKA5-SEFEF_DP	SMA Female	FDP180
WR42	18.0-26.5	42CLKA5-SRFEF_P0	42CLKA5-SRFRF_P0	42CLKA5-SEFEF_P0	SMA Female	APF42
		42CLKA5-KRFEF_P0	42CLKA5-KRFRF_P0	42CLKA5-KEFEF_P0	2.92mm Female	APF42
		-	42CLKA5-3.5RFRF_P0	-	3.5mm Female	APF42
WR34	22.0-33.0	34CLKA5-KRFEF_BP	34CLKA5-KRFRF_BP	34CLKA5-KEFEF_BP	2.92mm Female	FBP260
		34CLKA5-KRFEF_P0	34CLKA5-KRFRF_P0	34CLKA5-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKA5-KRFEF_P0	28CLKA5-KRFRF_P0	28CLKA5-KEFEF_P0	2.92mm Female	APF28
		28CLKA5-2.4RFEF_P0	28CLKA5-2.4RFRF_P0	28CLKA5-2.4EFEF_P0	2.4mm Female	APF28

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR34	22.0-33.0	34CLKA5-KRFEF_BP	34CLKA5-KRFRF_BP	34CLKA5-KEFEF_BP	2.92mm Female	FBP260
		34CLKA5-KRFEF_P0	34CLKA5-KRFRF_P0	34CLKA5-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKA5-KRFEF_P0	28CLKA5-KRFRF_P0	28CLKA5-KEFEF_P0	2.92mm Female	APF28
		28CLKA5-2.4RFEF_P0	28CLKA5-2.4RFRF_P0	28CLKA5-2.4EFEF_P0	2.4mm Female	APF28
		28CLKA5-1_P0	-	-	-	APF28

### Flange Description

Below flanges are available for WG Calibration Kits

- Standard Flange
- Precision Flange (APF)

The AINFO Precision Flanges(APF) on these components have precision indexing holes and indexing pins for precise mating alignment that maximizes measurement repeatability. They conform to all EIA WR standards for rectangular or round waveguide flanges.

## Waveguide VNA Calibration Kits - CLKB1 Kits Series



28CLKB1-KRFRF\_P0

### Features

- 1.7 to 40GHz
- WR430 Through WR28
- Short-Short-Load-Through (SSLT) calibration method using offset short
- Sliding Load Calibration
- Keysight (Agilent), Anritsu and Rohde & Schwarz VNAs Supported

### Description

The A-INFO CLKB1 Series Calibration Kits are waveguide kits designed to provide accurate SSLT(Short-Short-Load-Thru) calibration of VNA for measurement in rectangular waveguide from WR430 to WR28 (1.7 to 40GHz). CLKB1 Series Calibration Kits provide all the necessary components for an accurate SSLT calibration. In addition to SSLT calibration, CLKB1 Series can also make one-port SSL(Short-Short-Load) calibrations. All kit components have both standard flange and precision flange(APF Series).

### Components included in CLKB1 Series Waveguide Calibration Kits

QTY	Description	Notes
2	WG to Coaxial Adapter	Refer below table for each WG band.
1	Precision fixed termination	-
1	Precision Sliding Termination	-
1	Fixed (reference plane) Short	-
1	1/8λ high precision offset short	-
1	3/8λ high precision offset short	-
1	Verification Standard	-
1~3	Screw Pack	Qty is depending on WG band.
1	Dowel Pack*	For APF flange only.
1	Hex Ball Driver	-
1	Calibration Software**	Optional, not included in standard Model.
1	Carrying Case	-

#### Notes:

\*Indexing refer Precision Flange (APF)

\*\*Calibration Software currently supports Keysight 872x Series, PNA Series, Anritsu and Rohde&Schwarz ZVx Series. Please ask A-INFO for more information when place order.

#### Model Information

Example Part Number: 284 CLKB1 -XABAB\_DP

Waveguide Size: WR430 to WR28

Product Code, CLKB1 Series WG Calibration Kits

Test Port Adapter Connector Option:

**X:** Connector type, S for SMA; N for N type; 3.5 for 3.5mm, K for 2.92mm, 2.4 for 2.4mm, 1.85 for 1.85mm.

**A:** Type for WG to coaxial adapter, R for Right Angle, E for Endlunch.

**B:** Gender for each adapter, F for female, M for Male.

**For Example: -SRFEF**, **S** means the connector type of WG to coaxial adapters in Calibration Kits is SMA. **RF** means one adapter is Right Angle with Female connector, **EF** means another one is Endlaunch with Female connector.

**Order Kits with no Adapter Option:** use **-0**, For example 90CLKA5-0\_PB

(Note: Each model listed below can offer "-0" option)

**Order Kits with Two WG/WG Test Port Adapters Option:** use **-1**

(Note: No WG to Coaxial Adapter in "-1" option )

Flange Code, refer below model list table.

### Standard CLKB1 Series Waveguide Calibration Kits Model List

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR430	1.7-2.6	430CLKB1-NRFEF_P0	-	430CLKB1-NEFEF_P0	N type Female	APF430
		430CLKB1-SRFEF_P0	-	430CLKB1-SEFEF_P0	SMA Female	APF430
WR340	2.2-3.3	340CLKB1-NRFEF_P0	-	340CLKB1-NEFEF_P0	N type Female	APF340
		340CLKB1-SRFEF_P0	-	340CLKB1-SEFEF_P0	SMA Female	APF340
WR284	2.6-3.95	284CLKB1-NRFEF_DP	-	284CLKB1-NEFEF_DP	N type Female	FDP32
		284CLKB1-SRFEF_DP	-	284CLKB1-SEFEF_DP	SMA Female	FDP32
		284CLKB1-NRFEF_AP	284CLKB1-NRFRF_AP	284CLKB1-NEFEF_AP	N type Female	FAP32
		284CLKB1-SRFEF_AP	284CLKB1-SRFRF_AP	284CLKB1-SEFEF_AP	SMA Female	FAP32
		284CLKB1-NRFEF_PB	284CLKB1-NRFRF_PB	284CLKB1-NEFEF_PB	N type Female	APF284B
		284CLKB1-SRFEF_PB	284CLKB1-SRFRF_PB	284CLKB1-SEFEF_PB	SMA Female	APF284B
WR229	3.3-4.9	229CLKB1-SRFEF_DP	-	229CLKB1-SEFEF_DP	SMA Female	FDP40
		229CLKB1-NRFEF_DP	-	229CLKB1-NEFEF_DP	N type Female	FDP40
		229CLKB1-SRFEF_P0	-	229CLKB1-SEFEF_P0	SMA Female	APF229
		229CLKB1-NRFEF_P0	-	229CLKB1-NEFEF_P0	N type Female	APF229
WR187	3.95-5.85	187CLKB1-SRFEF_DP	187CLKB1-SRFRF_DP	187CLKB1-SEFEF_DP	SMA Female	FDP48
		-	187CLKB1-3.5RFRF_DP	-	3.5mm Female	FDP48
		187CLKB1-NRFEF_DP	187CLKB1-NRFRF_DP	187CLKB1-NEFEF_DP	N type Female	FDP48
		-	187CLKB1-7RFRF_DP	-	7mm	FDP48
		187CLKB1-SRFEF_AP	187CLKB1-SRFRF_AP	187CLKB1-SEFEF_AP	SMA Female	FAP48
		-	187CLKB1-3.5RFRF_AP	-	3.5mm Female	FAP48
		187CLKB1-NRFEF_AP	-	187CLKB1-NEFEF_AP	N type Female	FAP48
		187CLKB1-SRFEF_P0	187CLKB1-SRFRF_P0	187CLKB1-SEFEF_P0	SMA Female	APF187
		-	187CLKB1-3.5RFRF_P0	-	3.5mm Female	APF187
		187CLKB1-NRFEF_P0	-	187CLKB1-NEFEF_P0	N type Female	APF187
WR159	4.90-7.05	159CLKB1-SRFEF_DP	159CLKB1-SRFRF_DP	159CLKB1-SEFEF_DP	SMA Female	FDP58
		-	159CLKB1-3.5RFRF_DP	-	3.5mm Female	FDP58
		159CLKB1-NRFEF_DP	159CLKB1-NRFRF_DP	159CLKB1-NEFEF_DP	N type Female	FDP58
		-	159CLKB1-7RFRF_DP	-	7mm	FDP58
		159CLKB1-SRFEF_P0	159CLKB1-SRFRF_P0	159CLKB1-SEFEF_P0	SMA Female	APF159
		-	159CLKB1-3.5RFRF_P0	-	3.5mm Female	APF159
		159CLKB1-NRFEF_P0	159CLKB1-NRFRF_P0	159CLKB1-NEFEF_P0	N type Female	APF159
-	159CLKB1-7RFRF_P0	-	7mm	APF159		
WR137	5.85-8.20	137CLKB1-SRFEF_DP	137CLKB1-SRFRF_DP	137CLKB1-SEFEF_DP	SMA Female	FDP70
		-	137CLKB1-3.5RFRF_DP	-	3.5mm Female	FDP70
		137CLKB1-NRFEF_DP	137CLKB1-NRFRF_DP	137CLKB1-NEFEF_DP	N type Female	FDP70
		-	137CLKB1-7RFRF_DP	-	7mm	FDP70
		137CLKB1-SRFEF_AP	137CLKB1-SRFRF_AP	137CLKB1-SEFEF_AP	SMA Female	FAP70
		-	137CLKB1-3.5RFRF_AP	-	3.5mm Female	FAP70
		137CLKB1-NRFEF_AP	-	137CLKB1-NEFEF_AP	N type Female	FAP70
		137CLKB1-SRFEF_P0	137CLKB1-SRFRF_P0	137CLKB1-SEFEF_P0	SMA Female	APF137
		-	137CLKB1-3.5RFRF_P0	-	3.5mm Female	APF137
137CLKB1-NRFEF_P0	-	137CLKB1-NEFEF_P0	N type Female	APF137		



EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR112	7.05-10.0	112CLKB1-SRFEF_PB	112CLKB1-SRFRF_PB	112CLKB1-SEFEF_PB	SMA Female	APF112B
		-	112CLKB1-3.5RFRF_PB	-	3.5mm Female	APF112B
		112CLKB1-NRFEF_PB	112CLKB1-NRFRF_PB	112CLKB1-NEFEF_PB	N type Female	APF112B
		-	112CLKB1-7RFRF_PB	-	7mm	APF112B
		112CLKB1-SRFEF_DP	112CLKB1-SRFRF_DP	112CLKB1-SEFEF_DP	SMA Female	FDP84
		-	112CLKB1-3.5RFRF_DP	-	3.5mm Female	FDP84
		112CLKB1-NRFEF_DP	-	112CLKB1-NEFEF_DP	N type Female	FDP84
		112CLKB1-SRFEF_P0	112CLKB1-SRFRF_P0	112CLKB1-SEFEF_P0	SMA Female	APF112
		-	112CLKB1-3.5RFRF_P0	-	3.5mm Female	APF112
		112CLKB1-NRFEF_P0	-	112CLKB1-NEFEF_P0	N type Female	APF112
WR90	8.2-12.4	90CLKB1-SRFEF_PB	90CLKB1-SRFRF_PB	90CLKB1-SEFEF_PB	SMA Female	APF90B
		-	90CLKB1-3.5RFRF_PB	-	3.5mm Female	APF90B
		90CLKB1-NRFEF_PB	90CLKB1-NRFRF_PB	90CLKB1-NEFEF_PB	N type Female	APF90B
		-	90CLKB1-7RFRF_PB	-	7mm	APF90B
		90CLKB1-SRFEF_DP	-	90CLKB1-SEFEF_DP	SMA Female	FDP100
		90CLKB1-NRFEF_DP	-	90CLKB1-NEFEF_DP	N type Female	FDP100
		90CLKB1-SRFEF_P0	-	90CLKB1-SEFEF_P0	SMA Female	APF90
		90CLKB1-NRFEF_P0	-	90CLKB1-NEFEF_P0	N type Female	APF90
		90CLKB1-SRFEF_PA	-	90CLKB1-SEFEF_PA	SMA Female	APF90A
90CLKB1-NRFEF_PA	-	90CLKB1-NEFEF_PA	N type Female	APF90A		
WR75	10.0-15.0	75CLKB1-SRFEF_PB	75CLKB1-SRFRF_PB	75CLKB1-SEFEF_PB	SMA Female	APF75B
		-	75CLKB1-3.5RFRF_PB	-	3.5mm Female	APF75B
		75CLKB1-NRFEF_PB	75CLKB1-NRFRF_PB	75CLKB1-NEFEF_PB	N type Female	APF75B
		-	75CLKB1-7RFRF_PB	-	7mm	APF75B
		75CLKB1-SRFEF_DP	-	75CLKB1-SEFEF_DP	SMA Female	FDP120
		75CLKB1-NRFEF_DP	-	75CLKB1-NEFEF_DP	N type Female	FDP120
WR62	12.4-18.0	62CLKB1-SRFEF_P0	62CLKB1-SRFRF_P0	62CLKB1-SEFEF_P0	SMA Female	APF62
		-	62CLKB1-3.5RFRF_P0	-	3.5mm Female	APF62
		62CLKB1-NRFEF_P0	62CLKB1-NRFRF_P0	62CLKB1-NEFEF_P0	N type Female	APF62
		-	62CLKB1-7RFRF_P0	-	7mm	APF62
		62CLKB1-SRFEF_DP	-	62CLKB1-SEFEF_DP	SMA Female	FDP140
		62CLKB1-NRFEF_DP	-	62CLKB1-NEFEF_DP	N type Female	FDP140
WR51	15.0-22.0	51CLKB1-SRFEF_PC	51CLKB1-SRFRF_PC	51CLKB1-SEFEF_PC	SMA Female	APF51C
		51CLKB1-SRFEF_PA	51CLKB1-SRFRF_PA	51CLKB1-SEFEF_PA	SMA Female	APF51A
		51CLKB1-SRFEF_PB	51CLKB1-SRFRF_PB	51CLKB1-SEFEF_PB	SMA Female	APF51B
		51CLKB1-SRFEF_DP	-	51CLKB1-SEFEF_DP	SMA Female	FDP180
WR42	18.0-26.5	42CLKB1-SRFEF_P0	42CLKB1-SRFRF_P0	42CLKB1-SEFEF_P0	SMA Female	APF42
		42CLKB1-KRFEF_P0	42CLKB1-KRFRF_P0	42CLKB1-KEFEF_P0	2.92mm Female	APF42
		-	42CLKB1-3.5RFRF_P0	-	3.5mm Female	APF42

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR34	22.0-33.0	34CLKB1-KRFEF_BP	34CLKB1-KRFRF_BP	34CLKB1-KEFEF_BP	2.92mm Female	FBP260
		34CLKB1-KRFEF_P0	34CLKB1-KRFRF_P0	34CLKB1-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKB1-KRFEF_P0	28CLKB1-KRFRF_P0	28CLKB1-KEFEF_P0	2.92mm Female	APF28
		28CLKB1-2.4RFEF_P0	28CLKB1-2.4RFRF_P0	28CLKB1-2.4EFEF_P0	2.4mm Female	APF28
		28CLKB1-1_P0	-	-	-	APF28

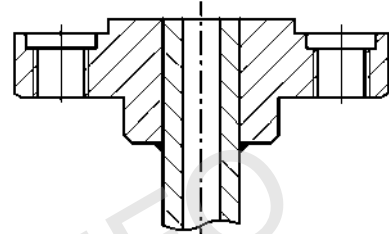
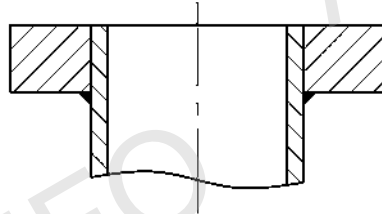
### Flange Description

Below flanges are available for WG Calibration Kits

- Standard Flange
- Precision Flange (APF)

The AINFO Precision Flanges(APF) on these components have precision indexing holes and indexing pins for precise mating alignment that maximizes measurement repeatability. They conform to all EIA WR standards for rectangular or round waveguide flanges.

### WG Flange



Ordering Information  
P/N :

<u>2300</u>	<u>-FDP3</u>
Waveguide Type (WR2300)	Flange Type

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR2300	0.32-0.49	2300-FDP3	FDP3	Al
WR2100	0.35-0.53	2100-FDP4	FDP4	Al
WR1800	0.41-0.62	1800-FDP5	FDP5	Al
WR1500	0.49-0.75	1500-FDP6	FDP6	Al
WR1150	0.64-0.96	1150-FDP8	FDP8	Al
WR975	0.75-1.12	975-FDP9	FDP9	Al
WR770	0.96-1.45	770-FDP12	FDP12	Al
WR650	1.12-1.70	650-FDP14	FDP14	Al
WR650	1.12-1.70	650-FDM14	FDM14	Al
WR510	1.45-2.20	510-FDP18	FDP18	Al
WR510	1.45-2.20	510-FDM18	FDM18	Al
WR430	1.70-2.60	430-FDP22	FDP22	Al/Cu
WR430	1.70-2.60	430-FDM22	FDM22	Al/Cu
WR430	1.70-2.60	430-APF430	APF430	Al/Cu
WR340	2.20-3.30	340-FDP26	FDP26	Al/Cu
WR340	2.20-3.30	340-FDM26	FDM26	Al/Cu
WR340	2.20-3.30	340-APF340	APF340	Al/Cu
WR284	2.60-3.95	284-FDP32	FDP32	Al/Cu
WR284	2.60-3.95	284-FDM32	FDM32	Al/Cu

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR284	2.60-3.95	284-FAP32	FAP32	Al/Cu
WR284	2.60-3.95	284-FAM32	FAM32	Al/Cu
WR284	2.60-3.95	284-FAE32	FAE32	Al/Cu
WR284	2.60-3.95	284-FEP32	FEP32	Al/Cu
WR284	2.60-3.95	284-APF284B	APF284B	Al/Cu
WR284	2.60-3.95	284-APF284	APF284	Al/Cu
WR284	2.60-3.95	284-APF284C	APF284C	Al/Cu
WR229	3.30-4.90	229-FDP40	FDP40	Al/Cu
WR229	3.30-4.90	229-FDM40	FDM40	Al/Cu
WR229	3.30-4.90	229-FAP40	FAP40	Al/Cu
WR229	3.30-4.90	229-FAM40	FAM40	Al/Cu
WR229	3.30-4.90	229-FAE40	FAE40	Al/Cu
WR229	3.30-4.90	229-FEP40	FEP40	Al/Cu
WR229	3.30-4.90	229-APF229	APF229	Al/Cu
WR229	3.30-4.90	229-APF229B	APF229B	Al/Cu
WR187	3.95-5.85	187-FDP48	FDP48	Al/Cu
WR187	3.95-5.85	187-FDM48	FDM48	Al/Cu
WR187	3.95-5.85	187-FAP48	FAP48	Al/Cu
WR187	3.95-5.85	187-FAM48	FAM48	Al/Cu
WR187	3.95-5.85	187-FAE48	FAE48	Al/Cu
WR187	3.95-5.85	187-FEP48	FEP48	Al/Cu
WR187	3.95-5.85	187-APF187	APF187	Al/Cu
WR187	3.95-5.85	187-APF187C	APF187C	Al/Cu
WR159	4.90-7.05	159-FDP58	FDP58	Al/Cu
WR159	4.90-7.05	159-FDM58	FDM58	Al/Cu
WR159	4.90-7.05	159-FAP58	FAP58	Al/Cu
WR159	4.90-7.05	159-FAM58	FAM58	Al/Cu
WR159	4.90-7.05	159-FAE58	FAE58	Al/Cu
WR159	4.90-7.05	159-FEP58	FEP58	Al/Cu
WR159	4.90-7.05	159-APF159	APF159	Al/Cu
WR159	4.90-7.05	159-APF159B	APF159B	Al/Cu
WR137	5.85-8.20	137-FDP70	FDP70	Al/Cu
WR137	5.85-8.20	137-FDM70	FDM70	Al/Cu
WR137	5.85-8.20	137-FAP70	FAP70	Al/Cu
WR137	5.85-8.20	137-FAM70	FAM70	Al/Cu
WR137	5.85-8.20	137-FAE70	FAE70	Al/Cu
WR137	5.85-8.20	137-FEP70	FEP70	Al/Cu
WR137	5.85-8.20	137-APF137	APF137	Al/Cu
WR137	5.85-8.20	137-APF137C	APF137C	Al/Cu
WR112	7.05-10.0	112-FBP84	FBP84	Al/Cu

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR112	7.05-10.0	112-FBM84	FBM84	Al/Cu
WR112	7.05-10.0	112-FBE84	FBE84	Al/Cu
WR112	7.05-10.0	112-FDP84	FDP84	Al/Cu
WR112	7.05-10.0	112-FDM84	FDM84	Al/Cu
WR112	7.05-10.0	112-FEP84	FEP84	Al/Cu
WR112	7.05-10.0	112-APF112B	APF112B	Al/Cu
WR112	7.05-10.0	112-APF112	APF112	Al/Cu
WR90	8.20-12.4	90-FBP100	FBP100	Cu/Al
WR90	8.20-12.4	90-FBM100	FBM100	Cu/Al
WR90	8.20-12.4	90-FBE100	FBE100	Cu/Al
WR90	8.20-12.4	90-FDP100	FDP100	Cu/Al
WR90	8.20-12.4	90-FDM100	FDM100	Cu/Al
WR90	8.20-12.4	90-FEP100	FEP100	Cu/Al
WR90	8.20-12.4	90-APF90B	APF90B	Cu/Al
WR90	8.20-12.4	90-APF90	APF90	Cu/Al
WR90	8.20-12.4	90-APF90A	APF90A	Cu/Al
WR75	10.0-15.0	75-FBP120	FBP120	Cu/Al
WR75	10.0-15.0	75-FBM120	FBM120	Cu/Al
WR75	10.0-15.0	75-FBE120	FBE120	Cu/Al
WR75	10.0-15.0	75-FDP120	FDP120	Cu/Al
WR75	10.0-15.0	75-FDM120	FDM120	Cu/Al
WR75	10.0-15.0	75-APF75B	APF75B	Cu/Al
WR75	10.0-15.0	75-APF75A	APF75A	Cu/Al
WR62	12.4-18.0	62-FBP140	FBP140	Cu/Al
WR62	12.4-18.0	62-FBM140	FBM140	Cu/Al
WR62	12.4-18.0	62-FBE140	FBE140	Cu/Al
WR62	12.4-18.0	62-FDP140	FDP140	Cu/Al
WR62	12.4-18.0	62-FDM140	FDM140	Cu/Al
WR62	12.4-18.0	62-APF62	APF62	Cu/Al
WR51	15.0-22.0	51-FBP180	FBP180	Cu/Al
WR51	15.0-22.0	51-FBM180	FBM180	Cu/Al
WR51	15.0-22.0	51-FBE180	FBE180	Cu/Al
WR51	15.0-22.0	51-FDP180	FDP180	Cu/Al
WR51	15.0-22.0	51-FDM180	FDM180	Cu/Al
WR51	15.0-22.0	51-APF51C	APF51C	Cu/Al
WR51	15.0-22.0	51-APF51B	APF51B	Cu/Al
WR51	15.0-22.0	51-APF51A	APF51A	Cu/Al
WR42	18.0-26.5	42-FBP220	FBP220	Cu/Al
WR42	18.0-26.5	42-FBM220	FBM220	Cu/Al
WR42	18.0-26.5	42-FBE220	FBE220	Cu/Al
WR42	18.0-26.5	42-APF42	APF42	Cu/Al

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR34	WR34	WR34	WR34	WR34
WR34	WR34	WR34	WR34	WR34
WR34	22.0-33.0	34-FBE260	FBE260	Cu/Al
WR34	22.0-33.0	34-APF34	APF34	Cu/Al
WR28	26.5-40.0	28-FBP320	FBP320	Cu/Al
WR28	26.5-40.0	28-FBM320	FBM320	Cu/Al
WR28	26.5-40.0	28-FBE320	FBE320	Cu/Al
WR28	26.5-40.0	28-APF28	APF28	Cu/Al
WR22	33.0-50.0	22-FUGP400_Cu	FUGP400	Cu
WR22	33.0-50.0	22-APF22_Cu	APF22	Cu
WR22	33.0-50.0	22-APF22A_Cu	APF22A	Cu
WR19	40.0-60.0	19-FUGP500_Cu	FUGP500	Cu
WR19	40.0-60.0	19-APF19_Cu	APF19	Cu
WR19	40.0-60.0	19-APF19A_Cu	APF19A	Cu
WR15	50.0-75.0	15-FUGP620_Cu	FUGP620	Cu
WR15	50.0-75.0	15-APF15_Cu	APF15	Cu
WR15	50.0-75.0	15-APF15A_Cu	APF15A	Cu
WR12	60.0-90.0	12-FUGP740_Cu	FUGP740	Cu
WR12	60.0-90.0	12-APF12_Cu	APF12	Cu
WR12	60.0-90.0	12-APF12A_Cu	APF12A	Cu
WR10	75.0-110.0	10-FUGP900_Cu	FUGP900	Cu
WR10	75.0-110.0	10-FAP900_Cu	FAP900	Cu
WR10	75.0-110.0	10-APF10_Cu	APF10	Cu
WR10	75.0-110.0	10-APF10A_Cu	APF10A	Cu
WR8	90.0-140.0	8-UG387_Cu	UG387	Cu
WR6	110.0-170.0	6-UG387_Cu	UG387	Cu
WR5	140.0-220.0	5-UG387_Cu	UG387	Cu

### Double Ridge WG Flange



Ordering Information

P/N :

<u>WRD84</u>	<u>-FPWRD84D24</u>
WR Size	Flange Type

EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	WRD84-FPWRD84D24	FPWRD84D24	Al/Cu
WRD200	2.0-4.8	WRD200-FPWRD200D24	FPWRD200D24	Al/Cu
WRD250	2.6-7.8	WRD250-FPWRD250D30	FPWRD250D30	Al/Cu
WRD350	3.5-8.2	WRD350-FPWRD350D24	FPWRD350D24	Al/Cu
WRD475	4.75-11.0	WRD475-FPWRD475D24	FPWRD475D24	Al/Cu
WRD580	5.8-16.0	WRD580-FPWRD580D28_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	WRD650-FPWRD650D28_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	WRD750-FPWRD750D24_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	WRD110-FPWRD110C24_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	WRD180-FPWRD180C24_Cu	FPWRD180C24	Cu

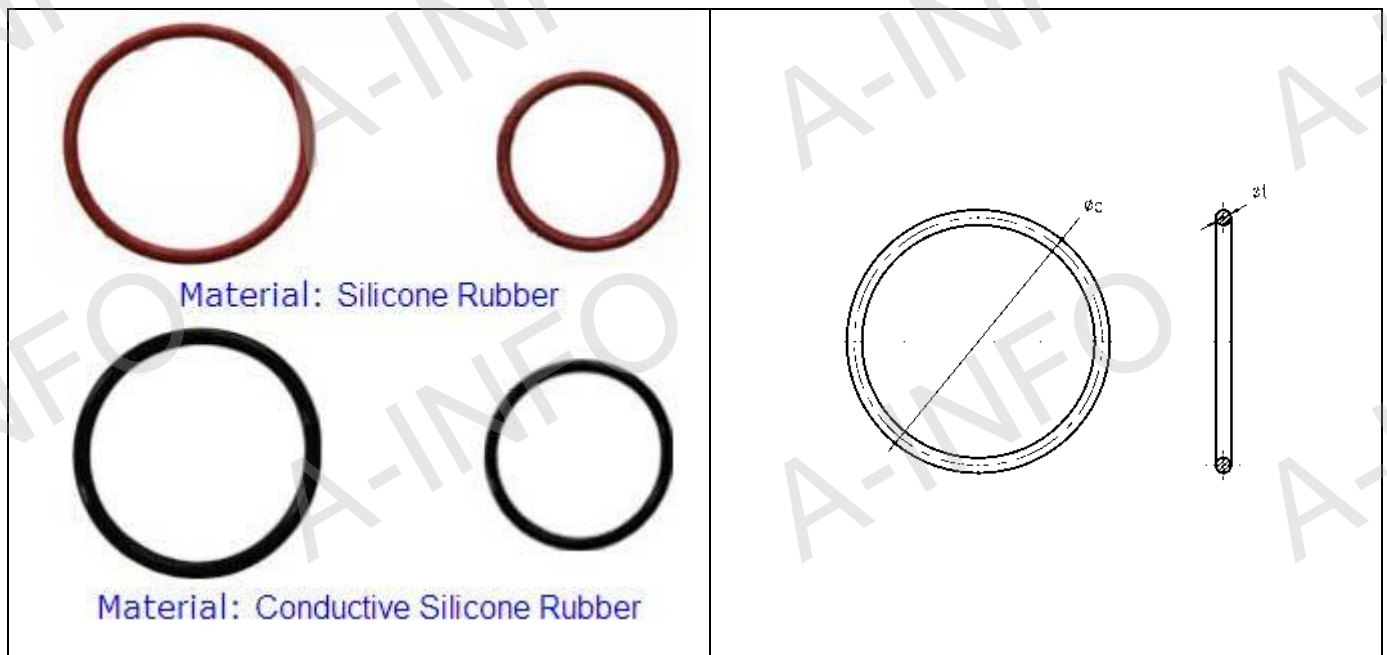
### WG Gasket

Ordering Information

P/N :

<u>90</u>	<u>-FBM100</u>	<u>-R</u>
WR Size	Flange Type	Material (M): R=Silicone Rubber, RC=Conductive Silicone Rubber

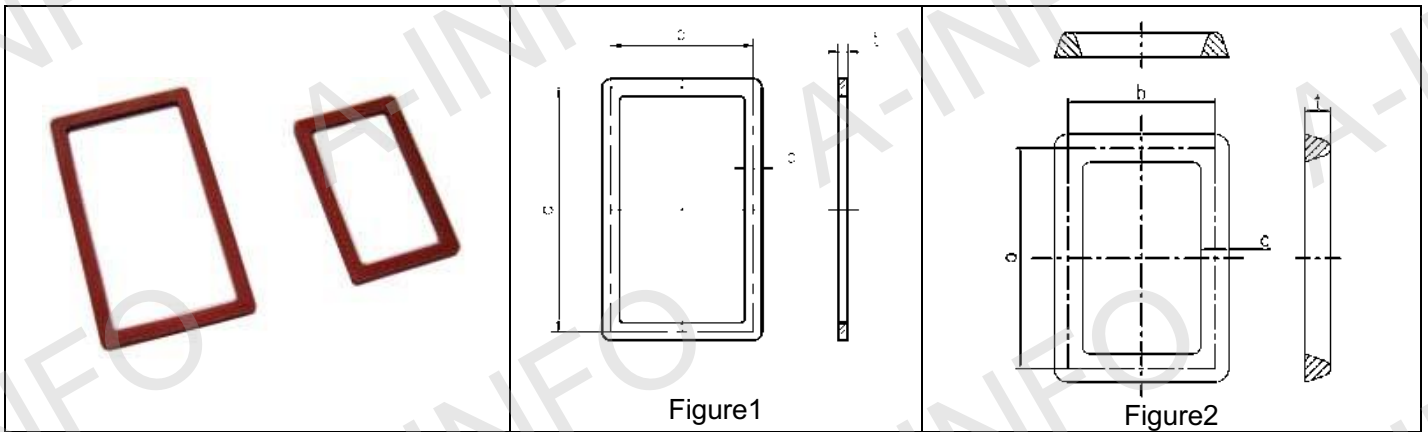
### Circular Waveguide Gasket



EIA WR	P/N	Flange	Size (mm)	
			$\Phi d$	$\Phi t$
WR284	284-FAM32-R	FAM32/FAE32	-	-
WR229	229-FAM40-R	FAM40/FAE40	-	-
WR187	187-FAM48-R	FAM48/FAE48	-	-
WR159	159-FAM58-R	FAM58/FAE58	-	-
WR137	137-FAM70-R	FAM70/FAE70	56.3	3.5
WR112	112-FBM84-R	FBM84/FBE84	42.5	2.6
WR90	90-FBM100-R	FBM100/FBE100	36.2	2.6
WR75	75-FBM120-R	FBM120/FBE120	30.3	2.6
WR62	62-FBM140-R	FBM140/FBE140	26.1	2.6
WR51	51-FBM180-R	FBM180/FBE180	22.2	2.6
WR42	42-FBM220-R	FBM220/FBE220	17.1	1.9
WR34	34-FBM260-R	FBM260/FBE260	15.7	1.9
WR28	28-FBM320-R	FBM320/FBE320	12.5	1.9



### Rectangular Waveguide Gasket



EIA WR	P/N	Flange	Figure	Size(mm)			
				a	b	c	t
WR650	650-FDM14-R	FDM14	Figure 2	-	-	-	-
WR510	510-FDM18-R	FDM18	Figure 2	-	-	-	-
WR430	430-FDM22-R	FDM22	Figure 2	125.7	71.1	7.3	4
WR340	340-FDM26-R	FDM26	Figure 2	102.9	59.7	7.3	4
WR284	284-FDM32-R	FDM32	Figure 2	84.2	46.1	4.8	2.8
WR229	229-FDM40-R	FDM40	Figure 2	69.3	40.2	4.8	2.8
WR187	187-FDM48-R	FDM48	Figure 1	58.7	33.3	4.8	2.8
WR159	159-FDM58-R	FDM58	Figure 1	51.5	31.3	4.8	2.8
WR137	137-FDM70-R	FDM70	Figure 1	44.8	25.8	3	2.7
WR112	112-FDM84-R	FDM84	Figure 1	38.5	22.6	3.6	2.7
WR90	90-FDM100-R	FDM100	Figure 1	32.2	19.5	3.6	2.7
WR75	75-FDM120-R	FDM120	Figure 2	28.2	18.7	3.6	3.2
WR62	62-FDM140-R	FDM140	Figure 2	-	-	-	-
WR51	51-FDM180-R	FDM180	Figure 2	-	-	-	-

### WG Switch - Rectangular, SPDT/DPDT



Common Specification	
DC Power Supply(V)	27 ± 3
Current(A)	1.0 Max.
Note: For WR284 models, current is 2.0A Max.	
Operating Temperature(°C)	-55 ~ +85

* Freq. = Frequency Range
* I.L.= Insertion Loss
* Iso.=Isolation
* S.T.=Switching Time
* Mat. = Material

### E-Plane

EIA WRD	* Freq. (GHz)	P/N	Switch Type	VSWR	* I. L. (dB)	* Iso. (dB)	* S. T. (ms)	Flange	* Mat.
WR284	2.60-3.95	284WESMD	SPDT Latching	1.1	0.1	60	500	FDP32/ FDM32	Al
		284WDESMD	DPDT Latching						
WR229	3.30-4.90	229WESMD	SPDT Latching	1.1	0.1	60	200	FDP40/ FDM40	Al
		229WDESMD	DPDT Latching						
WR187	3.95-5.85	187WESMD	SPDT Latching	1.1	0.1	60	100	FDP48/ FDM48	Al
		187WDESMD	DPDT Latching						
WR159	4.90-7.05	159WESMD	SPDT Latching	1.1	0.1	60	100	FDP58/ FDM58	Al
		159WDESMD	DPDT Latching						
WR137	5.85-8.20	137WESMD	SPDT Latching	1.1	0.1	60	100	FDP70/ FDM70	Al
		137WDESMD	DPDT Latching						
WR112	7.05-10.0	112WESMD	SPDT Latching	1.1	0.1	60	100	FBP84/ FBM84/	Al
		112WDESMD	DPDT Latching						
WR90	8.20-12.4	90WESMD	SPDT Latching	1.1	0.1	60	100	FBP100/ FBM100/ FBE100	Al
		90WDESMD	DPDT Latching						
WR75	10.0-15.0	75WESMD	SPDT Latching	1.1	0.1	60	100	FBP120/ FBM120/ FBE120	Al
		75WDESMD	DPDT Latching						
WR62	12.4-18.0	62WESMD	SPDT Latching	1.1	0.1	60	100	FBP140/ FBM140/ FBE140	Al
		62WDESMD	DPDT Latching						
WR51	15.0-22.0	51WESMD	SPDT Latching	1.1	0.1	60	100	FBP180/ FBM180/ FBE180	Al
		51WDESMD	DPDT Latching						
WR42	18.0-26.5	42WESMD	SPDT Latching	1.15	0.15	60	100	FBP220/ FBM220/ FBE220	Al
		42WDESMD	DPDT Latching						
WR34	22.0-33.0	34WESMD	SPDT Latching	1.2	0.2	60	100	FBP260/ FBM260/ FBE260	Al
		34WDESMD	DPDT Latching						
WR28	26.5-40.0	28WESMD	SPDT Latching	1.2	0.2	60	100	FBP320/ FBM320/ FBE320	Al
		28WDESMD	DPDT Latching						

### H-Plane

EIA WRD	* Freq. (GHz)	P/N	Switch Type	VSWR	* I. L. (dB)	* Iso. (dB)	* S. T. (ms)	Flange	* Mat.
WR112	7.05-10.0	112WHSMD	SPDT Latching	1.1	0.1	60	100	FBP84/ FBM84/	Al
WR90	8.20-12.4	90WHSMD	SPDT Latching	1.1	0.1	60	100	FBP100/ FBM100/ FBE100	Al
WR75	10.0-15.0	75WHSMD	SPDT Latching	1.1	0.1	60	100	FBP120/ FBM120/ FBE120	Al
WR62	12.4-18.0	62WHSMD	SPDT Latching	1.1	0.1	60	100	FBP140/ FBM140/ FBE140	Al
WR51	15.0-22.0	51WHSMD	SPDT Latching	1.1	0.1	60	100	FBP180/ FBM180/ FBE180	Al
WR42	18.0-26.5	42WHSMD	SPDT Latching	1.15	0.15	60	100	FBP220/ FBM220/ FBE220	Al
		42WDHSMD	DPDT Latching						
WR34	22.0-33.0	34WHSMD	SPDT Latching	1.2	0.2	60	100	FBP260/ FBM260/ FBE260	Al
		34WDHSMD	DPDT Latching						
WR28	26.5-40.0	28WHSMD	SPDT Latching	1.2	0.2	60	100	FBP320/ FBM320/ FBE320	Al
		28WDHSMD	DPDT Latching						
WR22	33.0-50.0	22WHSMD	SPDT Latching	1.2	0.5	60	100	FUGP400	Cu
		22WDHSMD	DPDT Latching						
WR19	40.0-60.0	19WHSMD	SPDT Latching	1.2	0.5	60	100	FUGP500	Cu
		19WDHSMD	DPDT Latching						
WR15	50.0-75.0	15WHSMD	SPDT Latching	1.2	0.6	60	100	FUGP620	Cu
		15WDHSMD	DPDT Latching						
WR12	60.0-90.0	12WHSMD	SPDT Latching	1.2	0.7	60	100	FUGP740	Cu
		12WDHSMD	DPDT Latching						
WR10	75.0-110.0	10WHSMD	SPDT Latching	1.2	0.8	60	100	FUGP900	Cu
		10WDHSMD	DPDT Latching						

### WG Switch - Double Ridge, SPDT/DPDT



Common Specification	
DC Power Supply(V)	27 ± 3
Current(A)	1.0 Max.
Operating Temperature(°C)	-55 ~ +85

* Freq. = Frequency Range
* I.L.= Insertion Loss
* Iso.=Isolation
* S.T.=Switching Time
* Mat. = Material

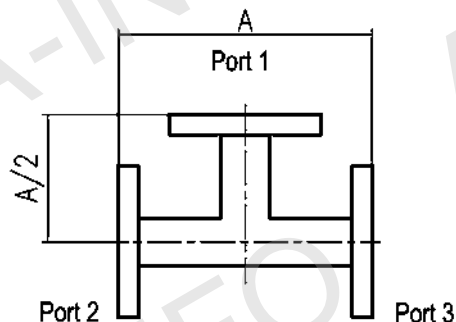
### E-Plane

EIA WRD	* Freq. (GHz)	P/N	Switch Type	VSWR	* I. L. (dB)	* Iso. (dB)	* S. T. (ms)	Flange	* Mat.
WRD475	4.75-11.0	475DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD475D24	Al
		475DRWDESMD	DPDT Latching					FMWRD475D24	
WRD580	5.8-16.0	580DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD580D28	Al
		580DRWDESMD	DPDT Latching					FMWRD580D28	
WRD650	6.5-18.0	650DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD650D28	Al
		650DRWDESMD	DPDT Latching					FMWRD650D28	
WRD750	7.5-18.0	750DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD750D24	Al
		750DRWDESMD	DPDT Latching					FMWRD750D24	
WRD110	11.0-26.5	110DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD110C24	Al
		110DRWDESMD	DPDT Latching					FMWRD110C24	
WRD180	18.0-40.0	180DRWESMD	SPDT Latching	1.2	0.5	60	100	FPWRD180C24	Al
		180DRWDESMD	DPDT Latching					FMWRD180C24	

### H-Plane

EIA WRD	* Freq. (GHz)	P/N	Switch Type	VSWR	* I. L. (dB)	* Iso. (dB)	* S. T. (ms)	Flange	* Mat.
WRD475	4.75-11.0	475DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD475D24 FMWRD475D24	Al
WRD580	5.8-16.0	580DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD580D28 FMWRD580D28	Al
WRD650	6.5-18.0	650DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD650D28 FMWRD650D28	Al
WRD750	7.5-18.0	750DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD750D24 FMWRD750D24	Al
WRD110	11.0-26.5	110DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD110C24 FMWRD110C24	Al
WRD180	18.0-40.0	180DRWHSMD	SPDT Latching	1.2	0.5	60	100	FPWRD180C24 FMWRD180C24	Al

### WG ET



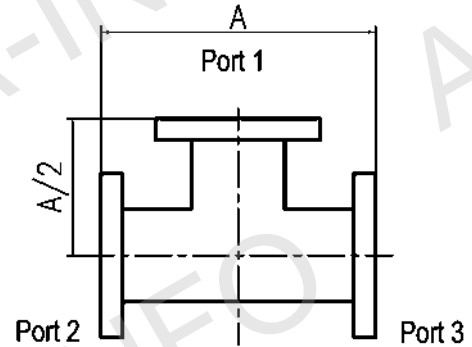
* Freq. = Frequency	* BW. = Bandwidth
* Unb. = Unbalance	* Mat. = Material

Ordering Information  
P/N :

<u>650</u>	<u>WET</u>
WR Size	Product Code

P/N	* Freq. (GHz)	VSWR	* Unb. (dB)	* BW	EIA WR	Flange	* Mat.	Net Weight
650WET	1.12-1.70	1.50	±0.25	FULL	WR650	FDP14/FDM14	Al	-
510WET	1.45-2.20	1.50	±0.25	FULL	WR510	FDP18/FDM18	Al	-
430WET	1.70-2.60	1.50	±0.25	FULL	WR430	FDP22/FDM22	Al	-
340WET	2.20-3.30	1.50	±0.25	FULL	WR340	FDP26/FDM26	Al	-
284WET	2.60-3.95	1.50	±0.25	FULL	WR284	FDP32/FDM32	Al	-
229WET	3.30-4.90	1.50	±0.25	FULL	WR229	FDP40/FDM40	Al	-
187WET	3.95-5.85	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	0.4
187WET/C10	4.40-5.00	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	0.4
159WET	4.90-7.05	1.50	±0.25	FULL	WR159	FDP58/FDM58	Al	0.3
137WET	5.85-8.20	1.50	±0.25	FULL	WR137	FDP70/FDM70	Al	-
112WET	7.05-10.0	1.50	±0.25	FULL	WR112	FBP84/FBM84/ FBE84	Al	-
90WET	8.20-12.4	1.50	±0.25	FULL	WR90	FBP100/FBM100/ FBE100	Al	0.1
75WET	10.0-15.0	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	0.1
62WET	12.4-18.0	1.50	±0.25	FULL	WR62	FBP140/FBM140/ FBE140	Al	-
51WET	15.0-22.0	1.50	±0.25	FULL	WR51	FBP180/FBM180/ FBE180	Al	-
42WET_Cu	18.0-26.5	1.50	±0.30	FULL	WR42	FBP220/FBM220/ FBE220	Cu	-
34WET_Cu	22.0-33.0	1.50	±0.30	FULL	WR34	FBP260/FBM260/ FBE260	Cu	-
28WET_Cu	26.5-40.0	1.50	±0.30	FULL	WR28	FBP320/FBM320/ FBE320	Cu	-
19WET_Cu	40.0-60.0	1.50	±0.40	FULL	WR19	FUGP500	Cu	0.34
15WET_Cu	50.0-75.0	1.30	±0.40	FULL	WR15	FUGP620	Cu	0.1
12WET_Cu	60.0-90.0	1.30	±0.40	FULL	WR12	FUGP740	Cu	0.1

### WG HT



* Freq. = Frequency	* BW. = Bandwidth
* Unb. = Unbalance	* Mat. = Material

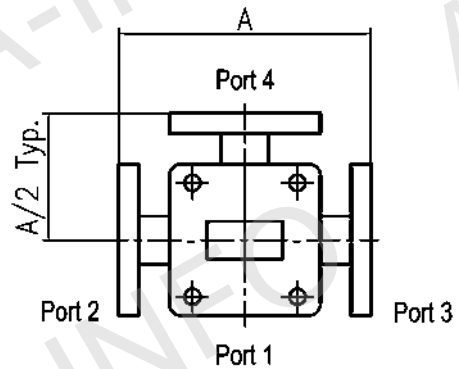
#### Ordering Information

P/N :

<u>650</u>	<u>WHT</u>
WR Size	Product Code

P/N	* Freq. (GHz)	VSWR	* Unb. (dB)	* BW	EIA WR	Flange	* Mat.	Net Weight
650WHT	1.12-1.70	1.50	±0.25	FULL	WR650	FDP14/FDM14	Al	-
510WHT	1.45-2.20	1.50	±0.25	FULL	WR510	FDP18/FDM18	Al	-
430WHT	1.70-2.60	1.50	±0.25	FULL	WR430	FDP22/FDM22	Al	-
340WHT	2.20-3.30	1.50	±0.25	FULL	WR340	FDP26/FDM26	Al	-
284WHT	2.60-3.95	1.50	±0.25	FULL	WR284	FDP32/FDM32	Al	0.65
229WHT	3.30-4.90	1.50	±0.25	FULL	WR229	FDP40/FDM40	Al	-
187WHT	3.95-5.85	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	-
159WHT	4.90-7.05	1.50	±0.25	FULL	WR159	FDP58/FDM58	Al	0.3
137WHT	5.85-8.20	1.50	±0.25	FULL	WR137	FDP70/FDM70	Al	-
112WHT	7.05-10.0	1.50	±0.25	FULL	WR112	FBP84/FBM84/ FBE84	Al	-
90WHT	8.20-12.4	1.50	±0.25	FULL	WR90	FBP100/FBM100/ FBE100	Al	0.1
75WHT	10.0-15.0	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	-
75WHT/C10	10.70-12.75	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	0.1
62WHT	12.4-18.0	1.50	±0.25	FULL	WR62	FBP140/FBM140/ FBE140	Al	-
51WHT	15.0-22.0	1.50	±0.25	FULL	WR51	FBP180/FBM180/ FBE180	Al	-
42WHT_Cu	18.0-26.5	1.50	±0.30	FULL	WR42	FBP220/FBM220/ FBE220	Cu	-
34WHT_Cu	22.0-33.0	1.50	±0.30	FULL	WR34	FBP260/FBM260/ FBE260	Cu	-
28WHT_Cu	26.5-40.0	1.50	±0.30	FULL	WR28	FBP320/FBM320/ FBE320	Cu	0.1

### WG Magic Tee



* Freq. = Frequency	* BW. = Bandwidth
* Unb. = Unbalance	* Mat. = Material
* Iso. = Isolation	* N.W.=Net Weight

#### Ordering Information

P/N :

<u>430</u>	<u>WMT</u>
WR Size	Product Code

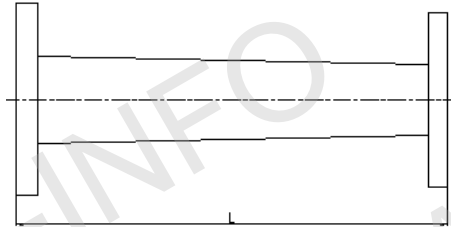
P/N	* Freq. (GHz)	VSWR H-Plane	VSWR E-Plane	* Unb. (dB)	* BW	* Iso. (dB)	EIA WR	Flange	* Mat.	* N.W.
430WMT	1.70-2.60	1.30	1.50	±0.40	FULL	30	WR430	FDP22/ FDM22	Al	-
340WMT	2.20-3.30	1.30	1.50	±0.40	FULL	30	WR340	FDP26/ FDM26	Al	1.6
284WMT	2.60-3.95	1.30	1.50	±0.40	FULL	30	WR284	FDP32/ FDM32	Al	1.0
229WMT	3.30-4.90	1.30	1.50	±0.40	FULL	30	WR229	FDP40/ FDM40	Al	-
187WMT	3.95-5.85	1.30	1.50	±0.40	FULL	30	WR187	FDP48/ FDM48	Al	-
159WMT	4.90-7.05	1.30	1.50	±0.40	FULL	30	WR159	FDP58/ FDM58	Al	-
137WMT	5.85-8.20	1.30	1.50	±0.40	FULL	30	WR137	FDP70/ FDM70	Al	-
112WMT	7.05-10.0	1.30	1.50	±0.40	FULL	30	WR112	FBP84/ FBM84/ FBE84	Al	-
90WMT	8.20-12.4	1.30	1.50	±0.40	FULL	30	WR90	FBP100/ FBM100/ FBE100	Al	0.3
75WMT	10.0-15.0	1.30	1.50	±0.40	FULL	30	WR75	FBP120/ FBM120/ FBE120	Al	0.3
62WMT	12.4-18.0	1.30	1.50	±0.40	FULL	30	WR62	FBP140/ FBM140/ FBE140	Al	0.12



P/N	* Freq. (GHz)	VSWR H-Plane	VSWR E-Plane	* Unb. (dB)	* BW	* Iso. (dB)	EIA WR	Flange	* Mat.	* N.W.
51WMT	15.0-22.0	1.30	1.50	±0.40	FULL	30	WR51	FBP180/ FBM180/ FBE180	Al	0.10
42WMT_Cu	18.0-26.5	1.30	1.50	±0.40	FULL	30	WR42	FBP220/ FBM220/ FBE220	Cu	0.20
34WMT_Cu	22.0-33.0	1.30	1.50	±0.40	FULL	30	WR34	FBP260/ FBM260/ FBE260	Cu	0.16
28WMT_Cu	26.5-40.0	1.30	1.50	±0.40	FULL	30	WR28	FBP320/ FBM320/ FBE320	Cu	0.10

### WG Transition - Rectangular to Rectangular

(Transitions in Overlapping Bands)



#### Ordering Information

P/N :

* Freq. = Frequency	* Mat. = Material
* N.W.=Net Weight	

<u>430340</u>	<u>WA</u>	<u>-330.2</u>
WR Size	Product Code	Length(mm)

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	* Mat.	* N.W.
WR430 to WR340	2.20 - 2.60	330.2/13	430340WA-330.2	1.05	WR430: FDP22/FDM22 WR340: FDP26/FDM26	Al	-
WR340 to WR284	2.60-3.30	292.1/11.5	340284WA-292.1	1.05	WR340: FDP26/FDM26 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al	-
WR284 to WR229	3.30-3.95	279.4/11	284229WA-279.4	1.05	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al	-
WR229 to WR187	3.95-4.90	254/10	229187WA-254	1.05	WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al	-
WR187 to WR159	4.90-5.85	228.6/9	187159WA-228.6	1.05	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al	-

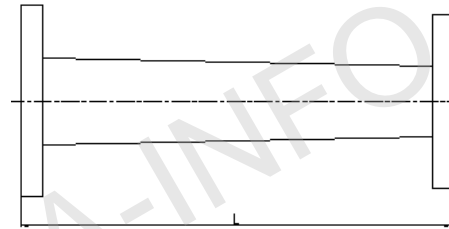
EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	* Mat.	* N.W.
WR159 to WR137	5.85-7.05	152.4/6	159137WA-152.4	1.1	WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al	-
WR159 to WR137	5.85-7.05	203.2/8	159137WA-203.2	1.05	WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al	-
WR137 to WR112	7.05-8.20	101.6/4	137112WA-101.6	1.05	WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al	0.10
WR137 to WR112	7.05-8.20	152.4/6	137112WA-152.4	1.05	WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al	-
WR112 to WR90	8.20-10.0	101.6/4	11290WA-101.6	1.05	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	0.06
WR112 to WR90	8.20-10.0	152.4/6	11290WA-152.4	1.08	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	-
WR90 to WR75	10.0-12.4	76.2/3	9075WA-76.2	1.05	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al	0.06

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	* Mat.	* N.W.
WR90 to WR75	10.0-12.4	127/5	9075WA-127	1.08	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al	-
WR75 to WR62	12.4-15.0	50/2	7562WA-50_Cu	1.05	WR75: FBP120/FBM120/FBE120/ FDP120/FDM120 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Cu	0.12
WR75 to WR62	12.4-15.0	101.6/4	7562WA-101.6_Cu	1.08	WR75: FBP120/FBM120/FBE120/ FDP120/FDM120 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Cu	0.18
WR62 to WR51	15.0-18.0	50/2	6251WA-50_Cu	1.05	WR62:FBP140/FBM140/ FBE140/FDP140/FDM140 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Cu	0.10
WR62 to WR51	15.0-18.0	101.6/4	6251WA-101.6_Cu	1.08	WR62: FBP140/FBM140/FBE140/ FDP140/FDM140 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Cu	-
WR51 to WR42	18.0-22.0	50/2	5142WA-50_Cu	1.05	WR51: FBP180/FBM180/FBE180/ FDP180/FDM180 WR42: FBP220/FBM220/FBE220	Cu	0.08
WR51 to WR42	18.0-22.0	101.6/4	5142WA-101.6_Cu	1.1	WR51: FBP180/FBM180/FBE180 WR42: FBP220/FBM220/FBE220	Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	* Mat.	* N.W.
WR42 to WR34	22.0-26.5	50/2	4234WA-50_Cu	1.17	WR42:FBP220/FBM220/ FBE220 WR34:FBP260/FBM260/ FBE260	Cu	-
WR42 to WR34	22.0-26.5	101.6/4	4234WA-101.6_Cu	1.1	WR42:FBP220/FBM220/ FBE220 WR34:FBP260/FBM260/ FBE260	Cu	-
WR34 to WR28	26.5-33.0	50/2	3428WA-50_Cu	1.05	WR34:FBP260/FBM260/ FBE260 WR28:FBP320/FBM320/ FBE320	Cu	0.04
WR28 to WR22	33.0-40.0	50/2	2822WA-50_Cu	1.10	WR28:FBP320/FBM320/ FBE320 WR22: FUGP400	Cu	0.04
WR22 to WR19	40.0-50.0	50/2	2219WA-50_Cu	1.1	WR22:FUGP400 WR19:FUGP500	Cu	0.04
WR19 to WR15	50.0-60.0	50/2	1915WA-50_Cu	1.1	WR19:FUGP500 WR15:FUGP620	Cu	0.04
WR15 to WR12	60.0-75.0	35.6/1.4	1512WA-35.6_Cu	1.1	WR15:FUGP620 WR12:FUGP740	Cu	0.03
WR15 to WR12	60.0-75.0	50/2	1512WA-50_Cu	1.1	WR15:FUGP620 WR12:FUGP740	Cu	0.03
WR12 to WR10	75.0-90.0	33/1.3	1210WA-33_Cu	1.1	WR12:FUGP740 WR10:FUGP900	Cu	0.03
WR12 to WR10	75.0-90.0	50/2	1210WA-50_Cu	1.1	WR12:FUGP740 WR10:FUGP900	Cu	0.03
WR10 to WR8	90.0-110.0	30/1.2	108WA-30_Cu	1.2	WR10:FUGP900 WR8:UG387/U-M	Cu	0.03
WR8 to WR6	110.0-140.0	30/1.2	86WA-30_Cu	1.2	WR8:UG387/U-M WR6:UG387/U-M	Cu	-
WR6 to WR5	140.0-170.0	25.4/1	65WA-25.4_Cu	1.2	WR6:UG387/U-M WR5:UG387/U-M	Cu	-

### WG Transition - Rectangular to Rectangular Transition Specials

(Transitions in Non-overlapping Bands)



#### Ordering Information

P/N :

<u>284187</u>	<u>WA</u>	<u>-304.8</u>
WR Size	Product Code	Length(mm)

\*Mat. = Material      \*N.W. = Net Weight

EIA WR	Length (mm/inch)	P/N	Flange	*Mat.	*N.W.
WR284 to WR187	304.8/12	284187WA-304.8	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al	-
WR284 to WR137	254/10	284137WA-254	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al	-
WR284 to WR90	304.8/12	28490WA-304.8	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	-
WR187 to WR137	136.6/5.38	187137WA-136.6	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al	0.30
WR187 to WR90	279.4/11	18790WA-279.4	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	0.72
WR187 to WR90	400/15.75	18790WA-400	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	-

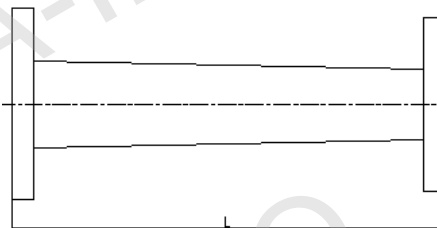
EIA WR	Length (mm/inch)	P/N	Flange	*Mat.	*N.W.
WR187 to WR75	304.8/12	18775WA-304.8	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al	-
WR137 to WR90	254/10	13790WA-254	WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al	-
WR137 to WR75	304.8/12	13775WA-304.8	WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al	-
WR112 to WR75	119.1/4.69	11275WA-119.1	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al	-
WR112 to WR28	254/10	11228WA-254	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR28:FBP320/FBM320/FBE320	Al	-
WR90 to WR62	152.4/6	9062WA-152.4	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Al	-
WR90 to WR42	203.2/8	9042WA-203.2_Cu	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR42:FBP220/FBM220/FBE220	Cu	-
WR90 to WR28	203.2/8	9028WA-203.2_Cu	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR28:FBP320/FBM320/FBE320	Cu	-
WR62 to WR42	25.4/1	6242WA-25.4_Cu	WR62:FBP140/FBM140/FBE140/ FDP140/FDM140 WR42:FBP220/FBM220/FBE220	Cu	-
WR62 to WR42	152.4/6	6242WA-152.4_Cu	WR62:FBP140/FBM140/FBE140/ FDP140/FDM140 WR42:FBP220/FBM220/FBE220	Cu	-
WR62 to WR28	152.4/6	6228WA-152.4_Cu	WR62:FBP140/FBM140/FBE140/ FDP140/FDM140 WR28:FBP320	Cu	-
WR42 to WR28	50/2	4228WA-50_Cu	WR42:FBP220 WR28:FBP320	Cu	0.04
WR42 to WR22	55.9/2.2	4222WA-55.9_Cu	WR42:FBP220 WR22:FUGP400	Cu	-
WR42 to WR19	63.5/2.5	4219WA-63.5_Cu	WR42:FBP220 WR19:FUGP500	Cu	-
WR42 to WR15	68.6/2.7	4215WA-68.6_Cu	WR42:FBP220 WR15:FUGP620	Cu	-

EIA WR	Length (mm/inch)	P/N	Flange	*Mat.	*N.W.
WR42 to WR12	83.8/3.3	4212WA-83.8_Cu	WR42:FBP220 WR12:FUGP740	Cu	-
WR42 to WR10	83.8/3.3	4210WA-83.8_Cu	WR42:FBP220 WR10:FUGP900	Cu	-
WR42 to WR8	83.8/3.3	428WA-83.8_Cu	WR42:FBP220 WR8:UG387/U-M	Cu	-
WR42 to WR6	88.9/3.5	426WA-88.9_Cu	WR42:FBP220 WR6:UG387/U-M	Cu	-
WR42 to WR5	91.4/3.6	425WA-91.4_Cu	WR42:FBP220 WR5:UG387/U-M	Cu	-
WR28 to WR19	50/2	2819WA-50_Cu	WR28:FBP320 WR19:FUGP500	Cu	-
WR28 to WR15	50/2	2815WA-50_Cu	WR28:FBP320 WR15:FUGP620	Cu	-
WR28 to WR12	55.9/2.2	2812WA-55.9_Cu	WR28:FBP320 WR12:FUGP740	Cu	-
WR28 to WR10	55.9/2.2	2810WA-55.9_Cu	WR28:FBP320 WR10:FUGP900	Cu	-
WR28 to WR8	55.9/2.2	288WA-55.9_Cu	WR28:FBP320 WR8:UG387/U-M	Cu	-
WR28 to WR6	58.4/2.3	286WA-58.4_Cu	WR28:FBP320 WR6:UG387/U-M	Cu	-
WR28 to WR5	61.0/2.4	285WA-61_Cu	WR28:FBP320 WR5:UG387/U-M	Cu	-
WR22 to WR15	45.7/1.8	2215WA-45.7_Cu	WR22:FUGP400 WR15:FUGP620	Cu	-
WR22 to WR12	45.7/1.8	2212WA-45.7_Cu	WR22:FUGP400 WR12:FUGP740	Cu	-
WR22 to WR10	45.7/1.8	2210WA-45.7_Cu	WR22:FUGP400 WR10:FUGP900	Cu	-
WR22 to WR8	45.7/1.8	228WA-45.7_Cu	WR22:FUGP400 WR8:UG387/U-M	Cu	-
WR22 to WR6	45.7/1.8	226WA-45.7_Cu	WR22:FUGP400 WR6:UG387/U-M	Cu	-
WR22 to WR5	48.3/1.9	225WA-48.3_Cu	WR22:FUGP400 WR5:UG387/U-M	Cu	-
WR19 to WR12	38.1/1.5	1912WA-38.1_Cu	WR19:FUGP500 WR12:FUGP740	Cu	-
WR19 to WR10	38.1/1.5	1910WA-38.1_Cu	WR19:FUGP500 WR10:FUGP900	Cu	-
WR19 to WR8	38.1/1.5	198WA-38.1_Cu	WR19:FUGP500 WR8:UG387/U-M	Cu	-
WR19 to WR6	38.1/1.5	196WA-38.1_Cu	WR19:FUGP500 WR6:UG387/U-M	Cu	-
WR19 to WR5	40.6/1.6	195WA-40.6_Cu	WR19:FUGP500 WR5:UG387/U-M	Cu	-



EIA WR	Length (mm/inch)	P/N	Flange	* Mat.	* N.W.
WR15 to WR10	35.6/1.4	1510WA-35.6_Cu	WR15:FUGP620 WR10:FUGP900	Cu	-
WR15 to WR8	35.6/1.4	158WA-35.6_Cu	WR15:FUGP620 WR8:UG387/U-M	Cu	-
WR15 to WR6	35.6/1.4	156WA-35.6_Cu	WR15:FUGP620 WR6:UG387/U-M	Cu	-
WR15 to WR5	35.6/1.4	155WA-35.6_Cu	WR15:FUGP620 WR5:UG387/U-M	Cu	-
WR12 to WR8	33/1.3	128WA-33_Cu	WR12:FUGP740 WR8:UG387/U-M	Cu	-
WR12 to WR6	33/1.3	126WA-33_Cu	WR12:FUGP740 WR6:UG387/U-M	Cu	-
WR12 to WR5	33/1.3	125WA-33_Cu	WR12:FUGP740 WR5:UG387/U-M	Cu	-
WR10 to WR6	30/1.2	106WA-30_Cu	WR10:FUGP900 WR6:UG387/U-M	Cu	-
WR10 to WR5	30/1.2	105WA-30_Cu	WR10:FUGP900 WR5:UG387/U-M	Cu	-
WR8 to WR5	27.9/1.1	85WA-27.9_Cu	WR8:UG387/U-M WR5:UG387/U-M	Cu	-

### WG Transition - Circular to Rectangular



#### 1. For Standard EIA WC Circular to Rectangular Waveguide Transition

#### Ordering Information

P/N :

* Freq. = Frequency
* Mat. = Material
* N.W. = Net Weight

<u>90</u>	<u>WC</u>	<u>94</u>	<u>WA</u>	<u>-XX</u>
Rectangular WG Size	EIA WC Waveguide Code	EIA Circular WC Designation	Product Code	Length (mm)

EIA WR	* Freq. Range GHz	Length (mm/inch)	P/N	VSWR	Flange	* Mat.
WR90	8.20-12.4	101.6 / 4	90WCXXWA-101.6	1.1	FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al
WR75	10.0-15.0	76.2 / 3	75WCXXWA-76.2	1.1	FBP120/FBM120/FBE120/ FDP120/FDM120	Al
WR62	12.4-18.0	50.8 / 2	62WCXXWA-50.8	1.1	FBP140/FBM140/FBE140/ FDP140/FDM140	Al
WR51	15.0-22.0	50.8 / 2	51WCXXWA- 50.8_Cu	1.1	FBP180/FBM180/FBE180/ FDP180/FDM180	Cu
WR42	18.0-26.5	50.8 / 2	42WCXXWA- 50.8_Cu	1.1	FBP220/FBM220/FBE220	Cu
WR34	22.0-33.0	50.8 / 2	34WCXXWA- 50.8_Cu	1.1	FBP260/FBM260/FBE260	Cu
WR28	26.5-40.0	38.1 / 1.5	28WCXXWA- 38.1_Cu	1.1	FBP320/FBM320/FBE320	Cu

EIA WR	* Freq. Range GHz	Length (mm/inch)	P/N	VSWR	Flange	* Mat.
WR22	33.0-50.0	38.1 / 1.5	22WCXXWA-38.1_Cu	1.1	FUGP400 (UG-383/U)	Cu
WR19	40.0-60.0	38.1 / 1.5	19WCXXWA-38.1_Cu	1.15	FUGP500 (UG-383/U modified)	Cu
WR15	50.0-75.0	27.9 / 1.1	15WCXXWA-27.9_Cu	1.15	FUGP620 (UG-385/U modified)	Cu
WR12	60.0-90.0	27.9 / 1.1	12WCXXWA-27.9_Cu	1.15	FUGP740 (UG-387/U)	Cu
WR10	75.0-110.0	27.9 / 1.1	10WCXXWA-27.9_Cu	1.15	FUGP900 (UG-387/U modified)	Cu
WR8	90.0-140.0	27.9 / 1.1	8WCXXWA-27.9_Cu	1.2	UG-387/U modified	Cu
WR6	110.0-170.0	27.9 / 1.1	6WCXXWA-27.9_Cu	1.2	UG-387/U modified	Cu

## 2. For Customized Circular to Rectangular Waveguide Transition

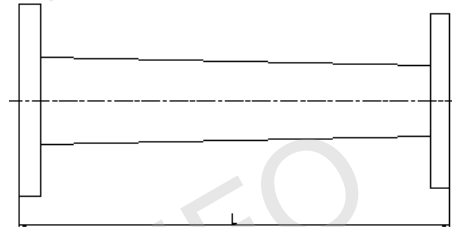
### Ordering Information

P/N :

<u>90</u>	<u>C</u>	<u>25</u>	<u>WA</u>	<u>-XX</u>
Rectangular WG Size	Customized Circular Waveguide Code	Circular Waveguide Diameter in mm	Product Code	Length (mm)

### WG Transition - Double Ridge to Rectangular

(Transitions in Overlapping Bands)



* Freq. = Frequency
* Mat. = Material
* N.W. = Net Weight

#### Ordering Information

P/N :

<u>84D</u>	<u>975</u>	<u>WA</u>	<u>-304.8</u>
WRD Size	WR Size	Product Code	Length (mm)

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD84 to WR975	0.84-1.12	304.8/12	84D975WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR975: FDP9	Al	-
WRD84 to WR770	0.96-1.45	304.8/12	84D770WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR770: FDP12	Al	-
WRD84 to WR650	1.12-1.70	304.8/12	84D650WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR650: FDP14/FDM14	Al	-
WRD84 to WR510	1.45-2.0	228.6/9	84D510WA-228.6	1.15	Cover or Groove	WRD84:FPWRD84D24 WR510: FDP18/FDM18	Al	-
WRD84 to WR430	1.70-2.0	228.6/9	84D430WA-228.6	1.15	Cover or Groove	WRD84:FPWRD84D24 WR430: FDP22/FDM22	Al/ Cu	-
WRD200 to WR430	2.0-2.60	228.6/9	200D430WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR430: FDP22/FDM22	Al/ Cu	-
WRD200 to WR340	2.20-3.30	228.6/9	200D340WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR340: FDP26/FDM26	Al/ Cu	-
WRD200 to WR284	2.60-3.95	228.6/9	200D284WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD200 to WR229	3.30-4.80	228.6/9	200D229WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD200 to WR187	3.95-4.80	228.6/9	200D187WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WRD250 to WR340	2.60-3.30	228.6/9	250D340WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR340: FDP26/FDM26	Al/ Cu	-
WRD250 to WR284	2.60-3.95	228.6/9	250D284WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD250 to WR229	3.30-4.90	228.6/9	250D229WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-
WRD250 to WR187	3.95-5.85	228.6/9	250D187WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al	-
WRD250 to WR159	4.90-7.05	203.2/8	250D159WA-203.2	1.15	Cover or Groove	WRD250:FPWRD250D30 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD250 to WR137	5.85-7.80	203.2/8	250D137WA-203.2	1.15	Cover or Groove	WRD250:FPWRD250D30 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD250 to WR112	7.05-7.80	177.8/7	250D112WA-177.8	1.15	Cover or Groove	WRD250:FPWRD250D30 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD350 to WR284	3.50-3.95	152.4/6	350D284WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD350 to WR229	3.50-4.90	152.4/6	350D229WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-
WRD350 to WR187	3.95-5.85	152.4/6	350D187WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	0.30
WRD350 to WR159	4.90-7.05	152.4/6	350D159WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD350 to WR137	5.85-8.20	152.4/6	350D137WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	0.25
WRD350 to WR112	7.05-8.20	152.4/6	350D112WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD475 to WR187	4.75-5.85	152.4/6	475D187WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WRD475 to WR159	4.90-7.05	152.4/6	475D159WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD475 to WR137	5.85-8.20	147.3/5.8	475D137WA-147.3	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD475 to WR112	7.05-10.0	114.3/4.5	475D112WA-114.3	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	0.10
WRD475 to WR90	8.20-11.0	152.4/6	475D90WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	0.17
WRD475 to WR75	10.0-11.0	152.4/6	475D75WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WRD580 to WR159	5.80-7.05	152.4/6	580D159WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD580 to WR137	5.85-8.20	152.4/6	580D137WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD580 to WR112	7.05-10.0	114.3/4.5	580D112WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD580 to WR90	8.20-12.4	127/5	580D90WA-127	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WRD580 to WR75	10.0-15.0	114.3/4.5	580D75WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR75:FBP120/FBM120/ FBE120/FDP120/FDM120	Al/ Cu	0.10/ Al
WRD580 to WR75	10.0-15.0	114.3/4.5	580D75WA- 114.3_Cu	1.15	Cover	WRD580:FPWRD580D28 WR75:FBP120	Cu	-
WRD580 to WR62	12.4-16.0	101.6/4	580D62WA-101.6	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR62:FBP140/FBM140/ FBE140/FDP140/FDM140	Al/ Cu	-
WRD580 to WR51	15.0-16.0	152.4/6	580D51WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR51:FBP180/FBM180/ FBE180/FDP180/FDM180	Al/ Cu	-
WRD650 to WR159	6.50-7.05	152.4/6	650D159WA-152.4	1.25	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD650 to WR137	6.50-8.20	152.4/6	650D137WA-152.4	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD650 to WR112	7.05-10.0	114.3/4.5	650D112WA-114.3	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD650 to WR90	8.20-12.4	127/5	650D90WA-127	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WRD650 to WR75	10.0-15.0	114.3/4.5	650D75WA-114.3	1.15	Cover/ Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WRD650 to WR62	12.4-18.0	101.6/4	650D62WA-101.6	1.15	Cover/ Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Al/ Cu	-
WRD650 to WR62	12.4-18.0	101.6/4	650D62WA- 101.6_Cu	1.15	Cover	WRD650:FPWRD650D28 WR62:FBP140	Cu	0.42
WRD650 to WR51	15.0-18.0	101.6/4	650D51WA-101.6	1.15	Cover/ Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR51: FBP180/FBM180/ FBE180/FDP180/FDM180	Al/ Cu	-
WRD750 to WR137	7.50-8.20	152.4/6	750D137WA-152.4	1.15	Cover/ Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR137: FDP70/FDM70/ FEP70/FAP70/FAM70/FAE7 0	Al	0.3
WRD750 to WR112	7.50-10.0	114.3/4.5	750D112WA-114.3	1.15	Cover/ Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD750 to WR90	8.20-12.4	127/5	750D90WA-127	1.15	Cover/ Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WRD750 to WR90	8.20-12.4	127/5	750D90WA- 127_Cu	1.15	Cover	WRD750:FPWRD750D24 WR90: FBP100	Cu	0.26
WRD750 to WR75	10.0-15.0	114.3/4.5	750D75WA-114.3	1.15	Cover/ Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WRD750 to WR75	10.0-15.0	114.3/4.5	750D75WA- 114.3_Cu	1.15	Cover	WRD750:FPWRD750D24 WR75:FBP120	Cu	0.26

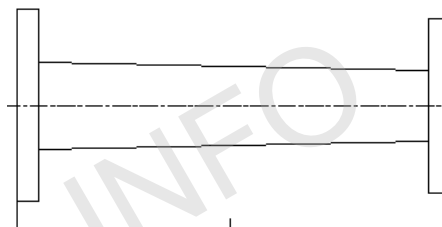


EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD750 to WR62	12.4-18.0	101.6/4	750D62WA-101.6	1.15	Cover/Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Al/ Cu	-
WRD750 to WR62	12.4-18.0	101.6/4	750D62WA-101.6_Cu	1.15	Cover	WRD750:FPWRD750D24 WR62:FBP140	Cu	0.26
WRD750 to WR51	15.0-18.0	101.6/4	750D51WA-101.6	1.15	Cover/Groove	WRD750:FPWRD750D24/ FMWRD750D24 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Al/ Cu	-
WRD750 to WR51	15.0-18.0	101.6/4	750D51WA-101.6_Cu	1.15	Cover	WRD750:FPWRD750D24 WR51:FBP180	Cu	0.26
WRD110 to WR90	11.0-12.4	76.2/3	110D90WA-76.2	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WRD110 to WR75	11.0-15.0	76.2/3	110D75WA-76.2	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WRD110 to WR62	12.4-18.0	63.5/2.5	110D62WA-63.5	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Al/ Cu	-
WRD110 to WR51	15.0-22.0	63.5/2.5	110D51WA-63.5	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Al/ Cu	-
WRD110 to WR42	18.0-26.5	50.8/2	110D42WA-50.8_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR42: FBP220/FBM220/FBE220	Cu	-
WRD110 to WR34	22.0-26.5	50.8/2	110D34WA-50.8_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR34: FBP260/FBM260/FBE260	Cu	-
WRD180 to WR42	18.0-26.5	50.8/2	180D42WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR42: FBP220/FBM220/FBE220	Cu	-

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	* Mat.	* N.W.
WRD180 to WR34	22.0-33.0	50.8/2	180D34WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR34: FBP260/FBM260/FBE260	Cu	-
WRD180 to WR28	26.5-40.0	50.8/2	180D28WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR28: FBP320/FBM320/FBE320	Cu	-

### WG Transition - Double Ridge to Rectangular Transition Specials

(Transitions in Non-overlapping Bands)



#### Ordering Information

P/N :

*Mat. = Material

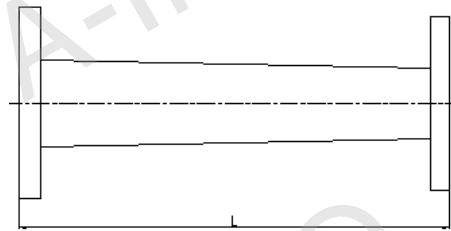
<u>84D</u>	<u>340</u>	<u>WA</u>	<u>-228.6</u>
WRD Size	WR Size	Product Code	Length (mm)

EIA WR	Length (mm/inch)	P/N	WRD Flange	WR Flange	*Mat.
WRD84 to WR340	228.6 / 9	84D340WA-228.6	Cover or Groove	WRD84:FPWRD84D24 WR340: FDP26/FDM26	Al/Cu
WRD84 to WR284	304.8 / 12	84D284WA-304.8	Cover or Groove	WRD84:FPWRD84D24 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32/	Al/Cu
WRD84 to WR229	304.8 / 12	84D229WA-304.8	Cover or Groove	WRD84:FPWRD84D24 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/Cu
WRD84 to WR187	304.8 / 12	84D187WA-304.8	Cover or Groove	WRD84:FPWRD84D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/Cu
WRD84 to WR159	304.8 / 12	84D159WA-304.8	Cover or Groove	WRD84:FPWRD84D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/Cu
WRD84 to WR137	304.8 / 12	84D137WA-304.8	Cover or Groove	WRD84:FPWRD84D24 WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/Cu
WRD200 to WR159	203.2 / 8	200D159WA-203.2	Cover or Groove	WRD200:FPWRD200D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/Cu
WRD200 to WR137	203.2 / 8	200D137WA-203.2	Cover or Groove	WRD200:FPWRD200D24 WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/Cu
WRD200 to WR112	177.8 / 7	200D112WA-177.8	Cover or Groove	WRD200:FPWRD200D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/Cu

EIA WR	Length (mm/inch)	P/N	WRD Flange	WR Flange	*Mat.
WRD200 to WR90	177.8 / 7	200D90WA-177.8	Cover or Groove	WRD200:FPWRD200D24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/Cu
WRD200 to WR75	152.4 / 6	200D75WA-152.4	Cover or Groove	WRD200:FPWRD200D24 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/Cu
WRD200 to WR62	152.4 / 6	200D62WA-152.4	Cover or Groove	WRD200:FPWRD200D24 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Al/Cu
WRD250 to WR90	177.8 / 7	250D90WA-177.8	Cover or Groove	WRD250:FPWRD250D30 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/Cu
WRD250 to WR75	152.4 / 6	250D75WA-152.4	Cover or Groove	WRD250:FPWRD250D30 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/Cu
WRD250 to WR62	152.4 / 6	250D62WA-152.4	Cover or Groove	WRD250:FPWRD250D30 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Al/Cu
WRD250 to WR51	152.4 / 6	250D51WA-152.4	Cover or Groove	WRD250:FPWRD250D30 WR51:FBP180/FBM180/FBE180/ FDP180/FDM180	Al/Cu
WRD350 to WR90	152.4 / 6	350D90WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/Cu
WRD350 to WR75	152.4 / 6	350D75WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/Cu
WRD350 to WR62	152.4 / 6	350D62WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Al/Cu
WRD350 to WR51	152.4 / 6	350D51WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR51:FBP180/FBM180/FBE180/ FDP180/FDM180	Al/Cu
WRD350 to WR42	152.4 / 6	350D42WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR42:FBP220/FBM220/FBE220	Al/Cu
WRD350 to WR34	152.4 / 6	350D34WA-152.4	Cover or Groove	WRD350:FPWRD350D24 WR34:FBP260/FBM260/FBE260	Al/Cu
WRD475 to WR62	152.4 / 6	475D62WA-152.4	Cover or Groove	WRD475:FPWRD475D24 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Al/Cu
WRD475 to WR51	152.4 / 6	475D51WA-152.4	Cover or Groove	WRD475:FPWRD475D24 WR51:FBP180/FBM180/FBE180/ FDP180/FDM180	Al/Cu

EIA WR	Length (mm/inch)	P/N	WRD Flange	WR Flange	* Mat.
WRD475 to WR42	152.4 / 6	475D42WA-152.4	Cover or Groove	WRD475:FPWRD475D24 WR42:FBP220/FBM220/FBE220	Al/Cu
WRD475 to WR34	152.4 / 6	475D34WA-152.4	Cover or Groove	WRD475:FPWRD475D24 WR34:FBP260/FBM260/FBE260	Al/Cu
WRD475 to WR28	152.4 / 6	475D28WA-152.4	Cover or Groove	WRD475:FPWRD475D24 WR28:FBP320/FBM320/FBE320	Al/Cu
WRD580 to WR42	152.4 / 6	580D42WA-152.4	Cover or Groove	WRD580:FPWRD580D28 WR42:FBP220/FBM220/FBE220	Al/Cu
WRD580 to WR34	152.4 / 6	580D34WA-152.4	Cover or Groove	WRD580:FPWRD580D28 WR34:FBP260/FBM260/FBE260	Al/Cu
WRD580 to WR28	152.4 / 6	580D28WA-152.4	Cover or Groove	WRD580:FPWRD580D28 WR28:FBP320/FBM320/FBE320	Al/Cu
WRD650 to WR42	152.4 / 6	650D42WA-152.4	Cover or Groove	WRD650:FPWRD650D28 WR42:FBP220/FBM220/FBE220	Al/Cu
WRD650 to WR34	152.4 / 6	650D34WA-152.4	Cover or Groove	WRD650:FPWRD650D28 WR34:FBP260/FBM260/FBE260	Al/Cu
WRD650 to WR28	152.4 / 6	650D28WA-152.4	Cover or Groove	WRD650:FPWRD650D28 WR28:FBP320/FBM320/FBE320	Al/Cu
WRD750 to WR42	152.4 / 6	750D42WA-152.4	Cover or Groove	WRD750:FPWRD750D24 WR42:FBP220/FBM220/FBE220	Al/Cu
WRD750 to WR34	152.4 / 6	750D34WA-152.4	Cover or Groove	WRD750:FPWRD750D24 WR34:FBP260/FBM260/FBE260	Al/Cu
WRD750 to WR28	152.4 / 6	750D28WA-152.4	Cover or Groove	WRD750:FPWRD750D24 WR28:FBP320/FBM320/FBE320	Al/Cu
WRD110 to WR28	50.8 / 2	110D28WA-50.8	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR28:FBP320/FBM320/FBE320	Cu

### WG Transition - Double Ridge to Double Ridge



Ordering Information  
P/N :

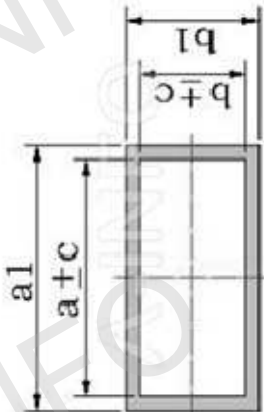
* Freq. = Frequency
* Mat. = Material

<u>250D</u>	<u>350D</u>	<u>WA</u>	<u>-203.2</u>
WRD Size	WRD Size	Product Code	Length (mm)

EIA WR	* Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WR Flange	* Mat.
WRD250 to WRD350	3.5-7.8	203.2/8	250D350DWA-203.2	1.15	WRD250:FPWRD250D30 WRD350:FPWRD350D24	Al/Cu
WRD475 to WRD580	5.8-11.0	165.1/6.5	475D580DWA-165.1	1.15	WRD475:FPWRD475D24 WRD580:FPWRD580D28	Cu/Al
WRD475 to WRD650	6.5-11.0	165.1/6.5	475D650DWA-165.1	1.15	WRD475:FPWRD475D24 WRD650:FPWRD650D28	Cu/Al
WRD475 to WRD750	7.5-11.0	165.1/6.5	475D750DWA-165.1	1.15	WRD475:FPWRD475D24 WRD750:FPWRD750D24	Cu/Al
WRD580 to WRD650	6.5-16.0	152.4/6	580D650DWA-152.4	1.15	WRD580:FPWRD580D28 WRD650:FPWRD650D28	Cu/Al
WRD580 to WRD750	7.5-16.0	152.4/6	580D750DWA-152.4	1.15	WRD580:FPWRD580D28 WRD750:FPWRD750D24	Cu/Al
WRD650 to WRD750	7.5-18.0	152.4/6	650D750DWA-152.4	1.15	WRD650:FPWRD650D28 WRD750:FPWRD750D24	Cu/Al

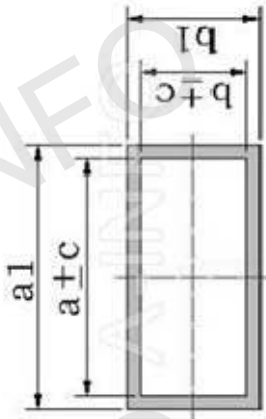
### Regular Waveguide Information

#### 1. Rectangular Waveguide Information



BJ	IEC 153 R	EIA WR	Frequency Range(GHz)	Inside Dimension		Wall Thickness (nominal)(mm)	Outside Dimension(mm)			Attenuation(dB/m)		
				Width a(mm)	Height b(mm)		Width a1(mm)	Height b1(mm)	Std. Tol. +/- (mm)	Freq. (GHz)	Theoretical	Max.
BJ3	R3	WR2300	0.32-0.49	584.2	292.1	-	-	-	-	-	0.00078	-
BJ4	R4	WR2100	0.35-0.53	533.4	266.7	-	-	-	-	-	0.0009	0.001
BJ5	R5	WR1800	0.41-0.62	457.2	228.6	-	-	-	-	-	0.00113	0.0012
BJ6	R6	WR1500	0.49-0.75	381	190.5	-	-	-	-	-	0.00149	0.0015
BJ8	R8	WR1150	0.64-0.96	292.1	146.05	-	-	-	-	-	0.00221	0.002
BJ9	R9	WR975	0.75-1.12	247.65	123.82	-	-	-	-	-	0.00283	0.003
BJ12	R12	WR770	0.96-1.45	195.58	97.79	-	-	-	-	-	0.00405	0.004
BJ14	R14	WR650	1.12-1.70	165.1	82.55	0.33	0.33	169.16	86.61	0.2	0.00522	0.005
BJ18	R18	WR510	1.45-2.20	129.54	64.77	0.26	0.26	133.6	68.83	0.2	0.00748	0.007
BJ22	R22	WR430	1.70-2.60	109.22	54.61	0.22	0.22	113.28	58.67	0.2	0.00967	0.01
BJ26	R26	WR340	2.20-3.30	86.36	43.18	0.17	0.17	90.42	47.24	0.17	0.00138	0.013
BJ32	R32	WR284	2.60-3.95	72.14	34.04	0.14	0.14	76.2	38.1	0.14	0.0188	0.018
BJ40	R40	WR229	3.30-4.90	58.17	29.08	0.12	0.12	61.42	32.33	0.12	0.0249	0.024
BJ48	R48	WR187	3.95-5.85	47.549	22.149	0.095	0.095	50.8	25.4	0.1	0.0354	0.032
BJ58	R58	WR159	4.90-7.05	40.386	20.193	0.081	0.081	43.64	23.44	0.08	0.043	0.046
BJ70	R70	WR137	5.85-8.20	34.849	15.799	0.07	0.07	38.1	19.05	0.08	0.0575	0.056
BJ84	R84	WR112	7.05-10.0	28.499	12.624	0.057	0.057	31.75	15.88	0.05	0.0791	0.075

### Regular Waveguide Information



BJ	IEC 153 R	EIA WR	Frequency Range(GHz)	Inside Dimension			Wall Thickness (nominal)(mm)	Outside Dimension(mm)			Attenuation(dB/m)		
				Width a(mm)	Height b(mm)	Std. Tol. +/- c(mm)		Width a1(mm)	Height b1(mm)	Std. Tol. +/- (mm)	Freq. (GHz)	Theoretical	Max.
BJ100	R100	WR90	8.20-12.4	22.86	10.16	0.046	1.270	25.4	12.7	0.05	9.84	0.11	0.103
BJ120	R120	WR75	10.0-15.0	19.05	9.525	0.038	1.270	21.59	12.06	0.05	11.8	0.133	0.143
BJ140	R140	WR62	12.4-18.0	15.799	7.899	0.031	1.015	17.83	9.93	0.05	14.2	0.176	-
BJ180	R180	WR51	15.0-22.0	12.954	6.477	0.026	1.015	14.99	8.51	0.05	17.4	0.236	-
BJ220	R220	WR42	18.0-26.5	10.668	4.318	0.021	1.015	12.7	6.35	0.05	21.1	0.368	-
BJ260	R260	WR34	22.0-33.0	8.636	4.318	0.02	1.015	10.67	6.35	0.05	26	0.436	-
BJ320	R320	WR28	26.5-40.0	7.112	3.556	0.02	1.015	9.14	5.59	0.05	31.6	0.583	-
BJ400	R400	WR22	33.0-50.0	5.69	2.845	0.02	1.015	7.72	4.88	0.05	39.5	0.815	-
BJ500	R500	WR19	40.0-60.0	4.775	2.388	0.02	1.015	6.81	4.42	0.05	47.1	1.058	-
BJ620	R620	WR15	50.0-75.0	3.759	1.88	0.02	1.015	5.79	3.91	0.05	59.8	1.52	-
BJ740	R740	WR12	60.0-90.0	3.0988	1.5494	0.0127	1.015	5.13	3.58	0.05	72.6	2.02	-
BJ900	R900	WR10	75.0-110.0	2.54	1.27	0.0127	1.015	4.57	3.3	0.05	88.5	2.73	-
BJ1200	R1200	WR8	90.0-140.0	2.032	1.016	0.0076	0.760	3.556	2.54	0.025	110.7	3.81	-
BJ1400	R1400	WR6	110.0-170.0	1.651	0.8255	0.0064	0.760	3.175	2.35	0.025	136.2	5.21	-
BJ1800	R1800	WR5	140.0-220.0	1.2954	0.6477	0.0064	0.760	2.819	2.172	0.025	173.6	7.49	-
BJ2200	R2200	WR4	170.0-260.0	1.0922	0.5461	0.0051	0.760	2.616	2.07	0.025	205.9	9.68	-
BJ2600	R2600	WR3	220.0-325.0	0.8636	0.4318	0.0051	0.760	2.388	1.956	0.025	260.2	13.76	-



## 2. Standard Circular Waveguide Information

BY	IEC	EIA WC	Frequency Range GHz	Cutoff Frequency GHz	Internal Diameter	
					mm	inch
BY8	C8	992	0.803~1.100	0.698	251.84	9.91
BY10	C10	847	0.939~1.290	0.817	215.14	8.47
BY12	C12	724	1.100~1.510	0.957	183.77	7.24
BY14	C14	618	1.290~1.760	1.12	157	6.18
BY16	C16	528	1.510~2.070	1.311	134.11	5.28
BY18	C18	451	1.760~2.420	1.534	114.58	4.51
BY22	C22	385	2.070~2.830	1.796	97.87	3.85
BY25	C25	329	2.420~3.310	2.102	83.62	3.29
BY30	C30	281	2.830~3.880	2.461	71.42	2.81
BY35	C35	240	3.310~4.540	2.88	61.04	2.40
BY40	C40	205	3.890~5.330	3.381	51.99	2.05
BY48	C48	175	4.540~6.230	3.955	44.45	1.75
BY56	C56	150	5.300~7.270	4.614	38.1	1.50
BY65	C65	128	6.210~8.510	5.402	32.537	1.28
BY76	C76	109	7.270~9.970	6.326	27.788	1.09
BY89	C89	94	8.490~11.600	7.377	23.825	0.94
BY104	C104	80	9.970~13.700	8.685	20.244	0.80
BY120	C120	69	11.600~15.900	10.057	17.415	0.69
BY140	C140	59	13.400~18.400	11.649	15.088	0.59
BY165	C165	50	15.900~21.800	13.842	12.7	0.50
BY190	C190	44	18.200~24.900	15.794	11.125	0.44
BY220	C220	38	21.200~29.100	18.446	9.525	0.38
BY255	C255	33	24.300~33.200	21.103	8.331	0.33
BY290	C290	28	28.300~38.800	24.62	7.137	0.28
BY330	C330	25	31.800~43.000	27.683	6.35	0.25
BY380	C380	22	36.400~49.800	31.617	5.563	0.22
BY430	C430	19	42.400~58.100	36.776	4.775	0.19
BY495	C495	17	46.300~63.500	40.227	4.369	0.17
BY580	C580	14	56.600~77.500	49.103	3.581	0.14
BY660	C660	13	63.500~87.200	55.28	3.175	0.13
BY765	C765	11	72.700~99.700	63.462	2.769	0.11
BY890	C890	9	84.800~116.000	73.552	2.388	0.09

### Standard Flange Information

#### 1. Standard Flange Information

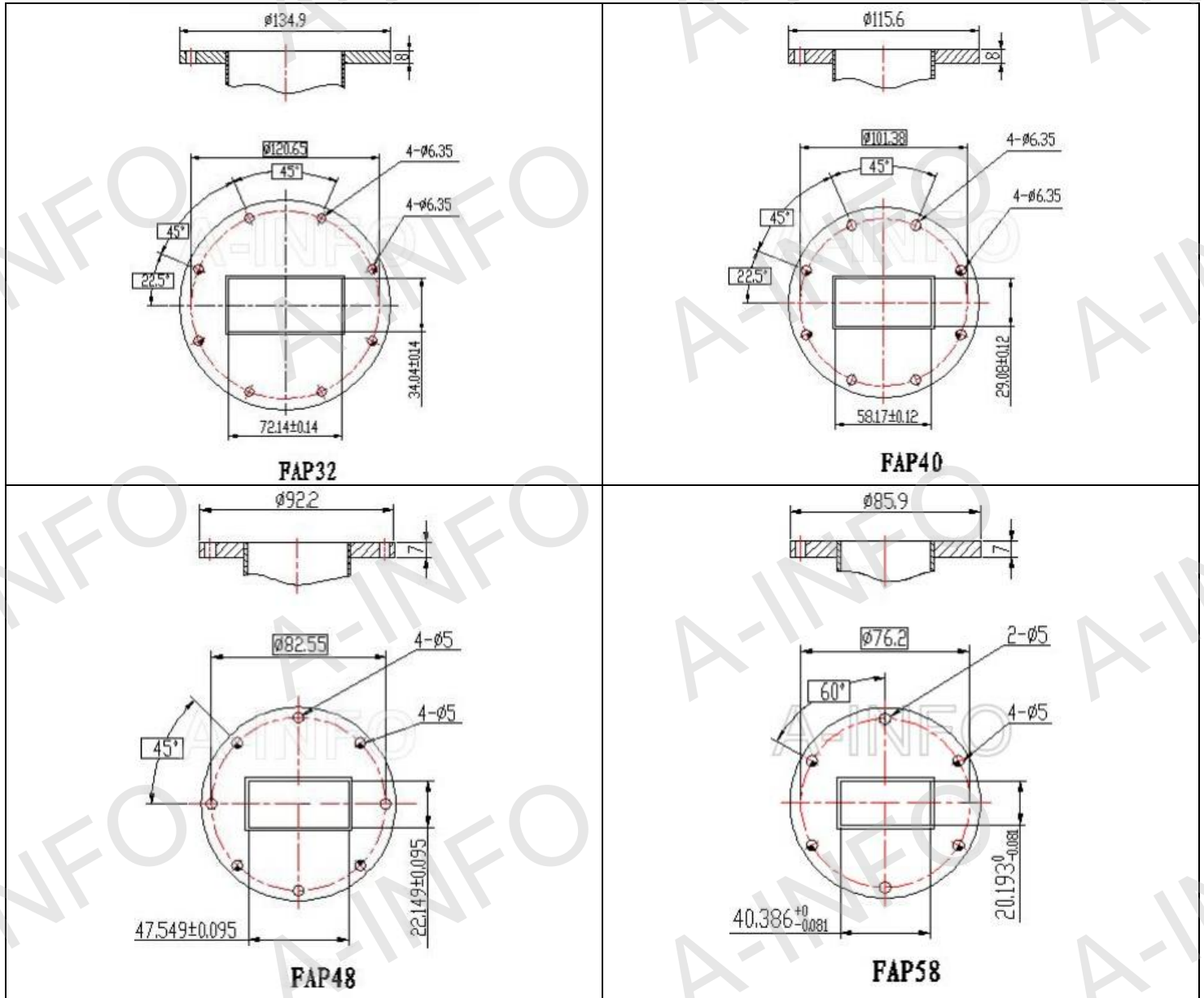
International Standard Waveguide	A Type			B Type			C Type		D Type		E Type	LD Type		UG
	FAP	FAM	FAE	FBP	FBM	FBE	FCP	FCM	FDP	FDM	FEP	LFDP	LFDM	FUGP
WR2300									FDP3					
WR2100									FDP4					
WR1800									FDP5					
WR1500									FDP6					
WR1150									FDP8					
WR975									FDP9					
WR770									FDP12					
WR650									FDP14	FDM14		LFDP14	LFDM14	
WR510									FDP18	FDM18		LFDP18	LFDM18	
WR430									FDP22	FDM22		LFDP22	LFDM22	
WR340									FDP26	FDM26		LFDP26	LFDM26	
WR284	FAP32	FAM32	FAE32						FDP32	FDM32	FEP32	LFDP32	LFDM32	
WR229	FAP40	FAM40	FAE40						FDP40	FDM40	FEP40	LFDP40	LFDM40	
WR187	FAP48	FAM48	FAE48						FDP48	FDM48	FEP48	LFDP48	LFDM48	
WR159	FAP58	FAM58	FAE58						FDP58	FDM58	FEP58	LFDP58	LFDM58	
WR137	FAP70	FAM70	FAE70						FDP70	FDM70	FEP70	LFDP70	LFDM70	
WR112				FBP84	FBM84	FBE84			FDP84	FDM84	FEP84			
WR90				FBP100	FBM100	FBE100			FDP100	FDM100	FEP100			
WR75				FBP120	FBM120	FBE120			FDP120	FDM120				
WR62				FBP140	FBM140	FBE140			FDP140	FDM140				
WR51				FBP180	FBM180	FBE180			FDP180	FDM180				
WR42				FBP220	FBM220	FBE220	FCP220	FCM220						
WR34				FBP260	FBM260	FBE260	FCP260	FCM260						
WR28				FBP320	FBM320	FBE320	FCP320	FCM320						
WR22	FAP400	FAM400					FCP400	FCM400						FUGP400
WR19	FAP500	FAM500					FCP500	FCM500						FUGP500
WR15	FAP620	FAM620												FUGP620
WR12	FAP740	FAM740												FUGP740
WR10	FAP900	FAM900												FUGP900
WR8	Refer Precision Flange Information													
WR6	Refer Precision Flange Information													
WR5	Refer Precision Flange Information													
WR4	Refer Precision Flange Information													
WR3	Refer Precision Flange Information													

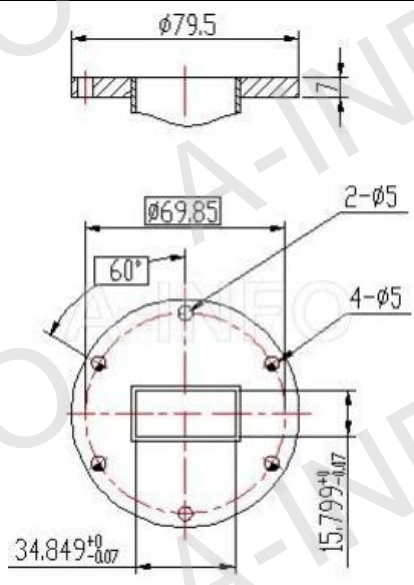
### 2. Waveguide Flange Equivalent

GB 11449-1989	IEC Std. Flange	UG Flange
FAE	CAR	-
FAM	PAR	-
FAP	UAR	-
FBE	CBR	-
FBM	PBR	-
FBP	UBR	-
FCM	PCR	-
FCP	VCR	-
FDM	PDR	-
FDP	UDR	-
FEP	UER	-
FUGP400	-	UG-383/U
FUGP500	-	UG-383/U-M
FUGP620	-	UG-385/U
FUGP740	-	UG-387/U
FUGP900	-	UG-387/U-M

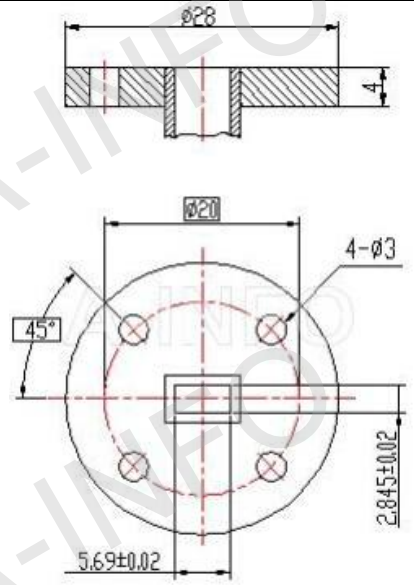
### 3. Flange Drawing

#### 3.1 A Type Flange (FAP, FAM, FAE)

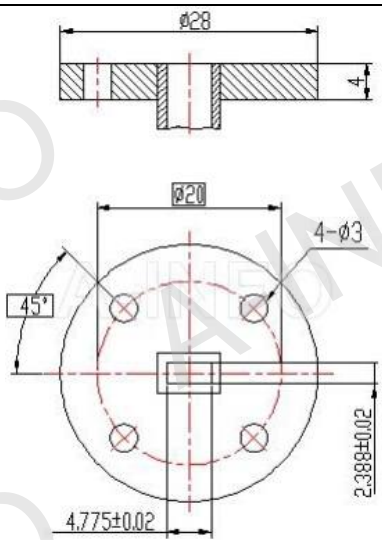




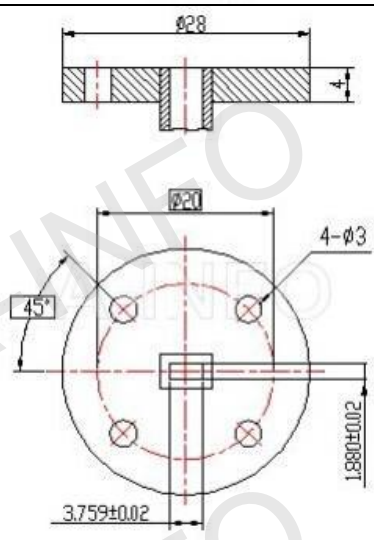
**FAP70**



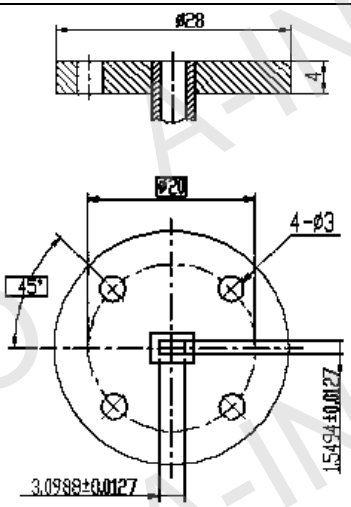
**FAP400**



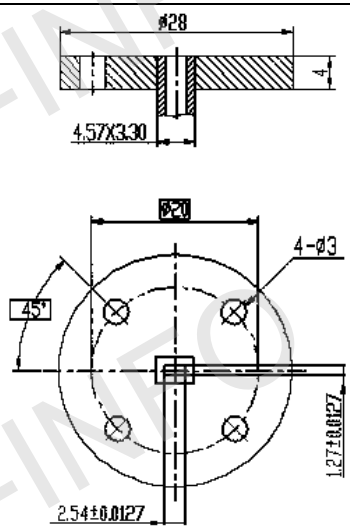
**FAP500**



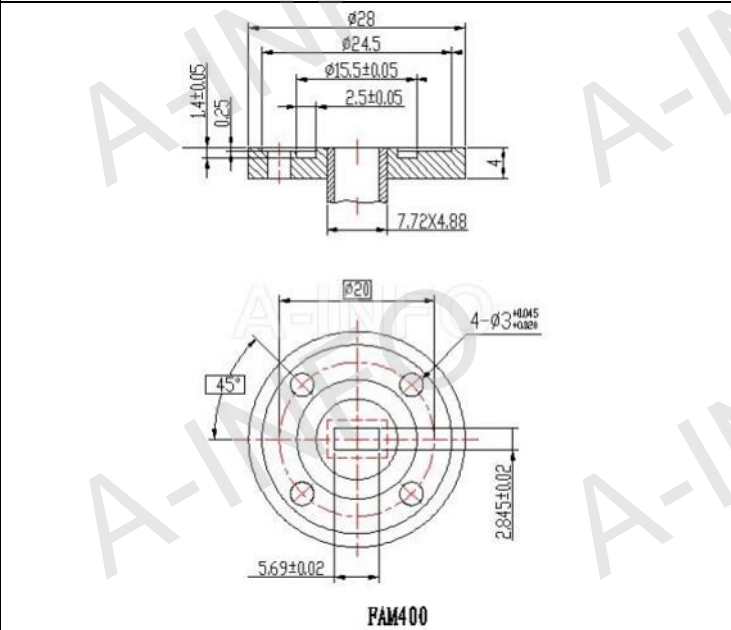
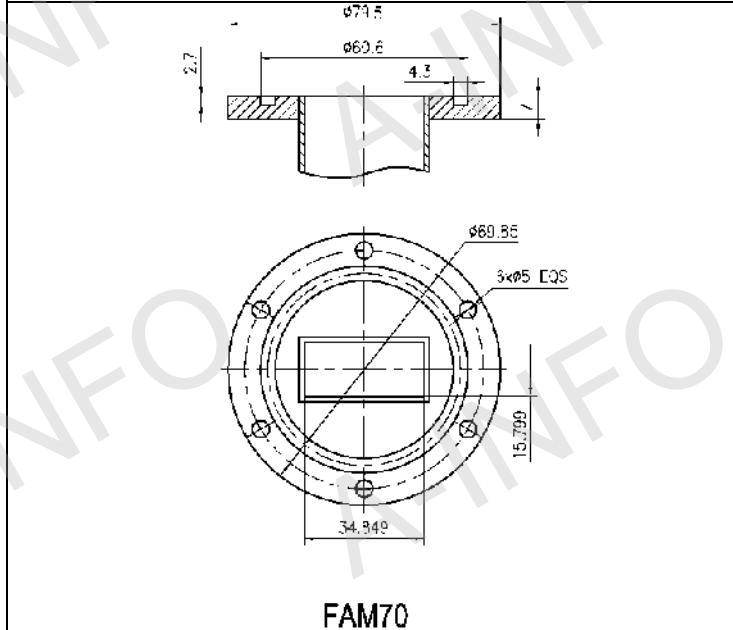
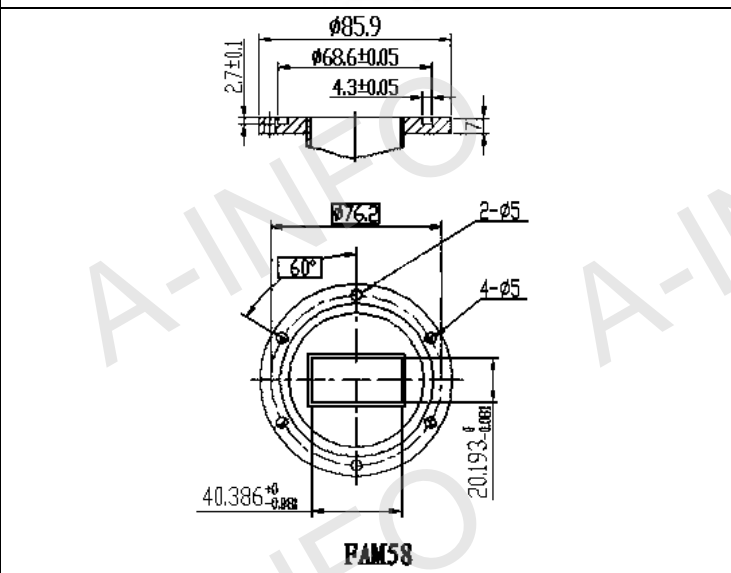
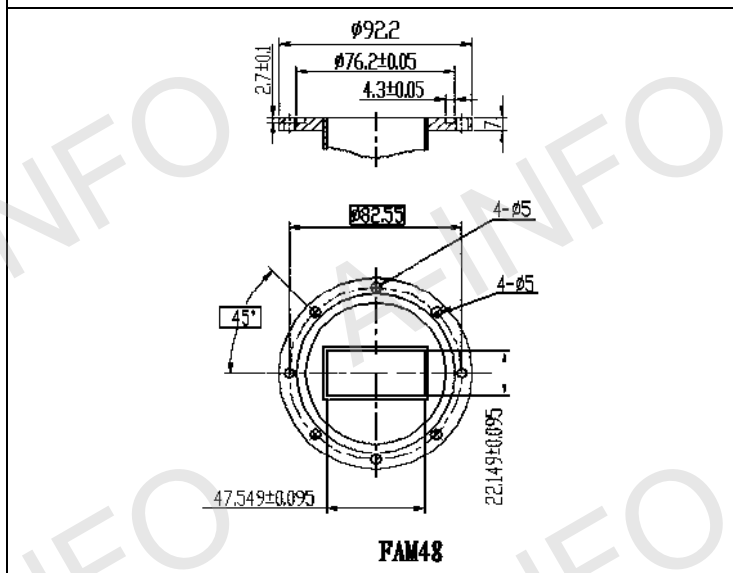
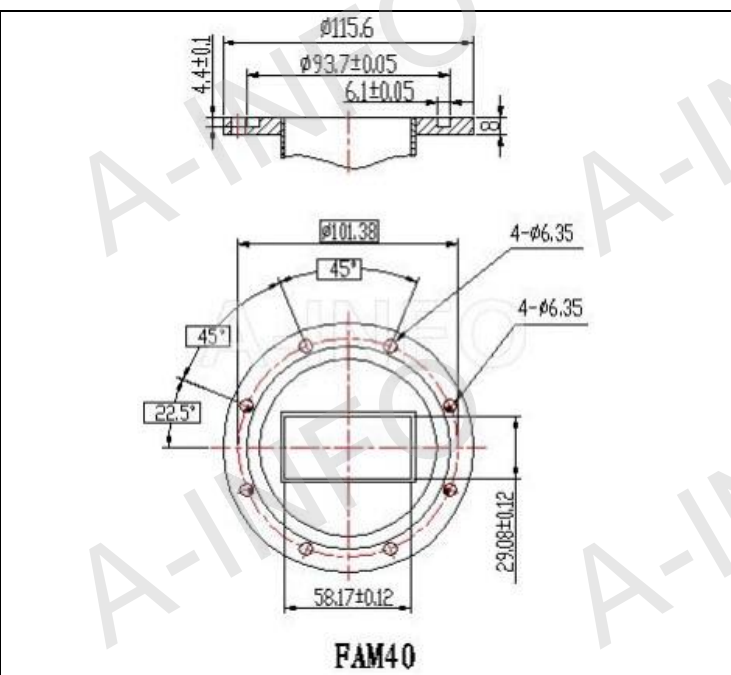
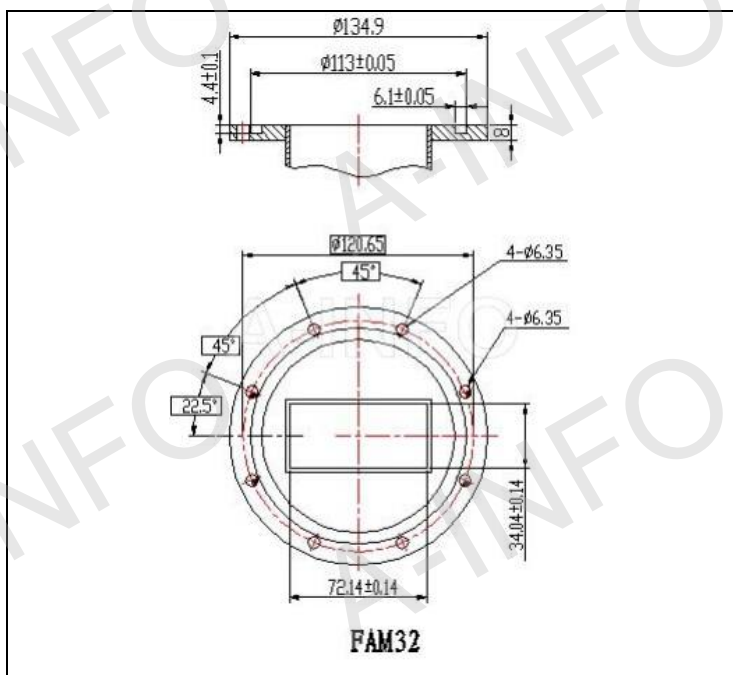
**FAP620**

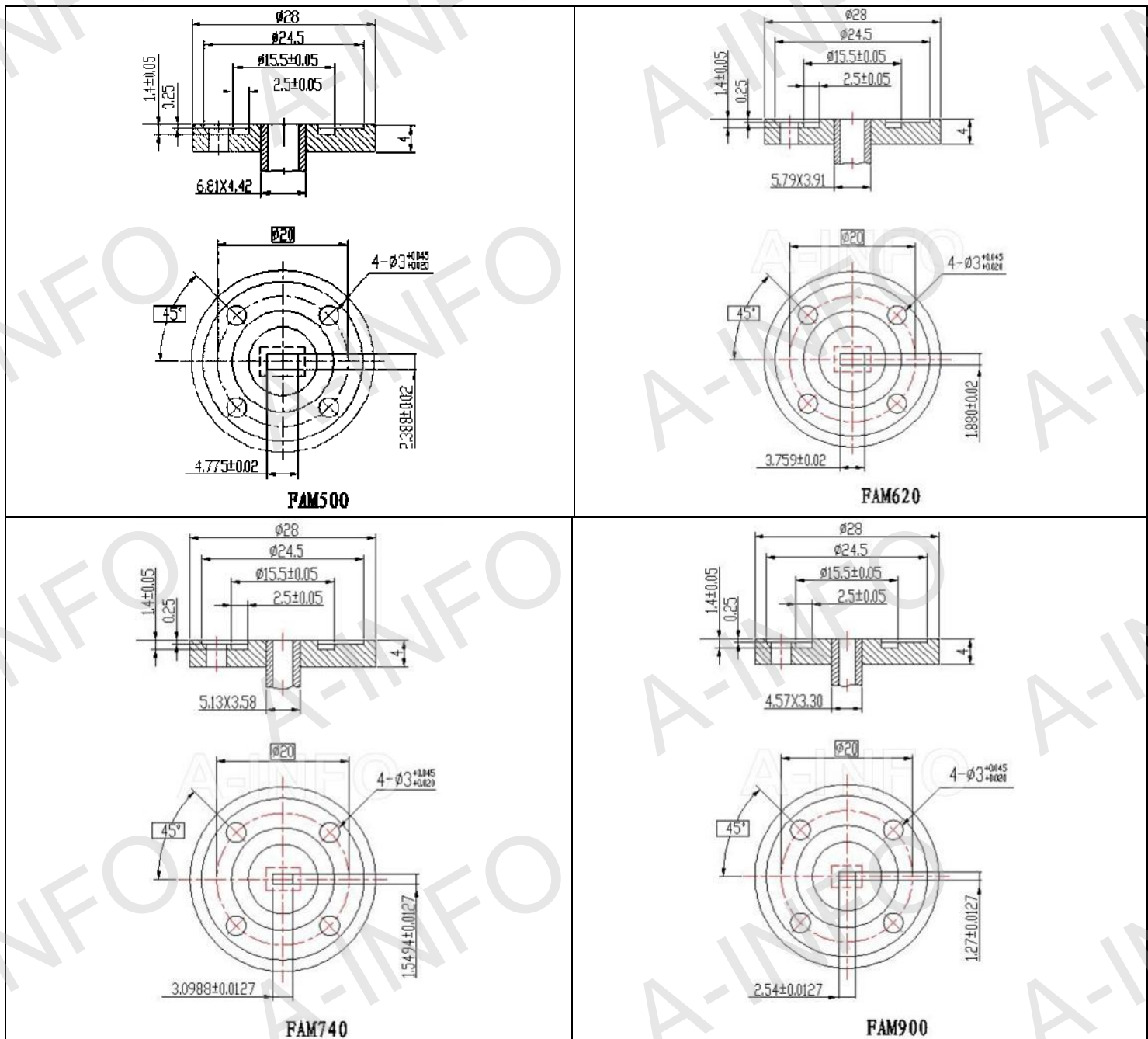


**FAP740**

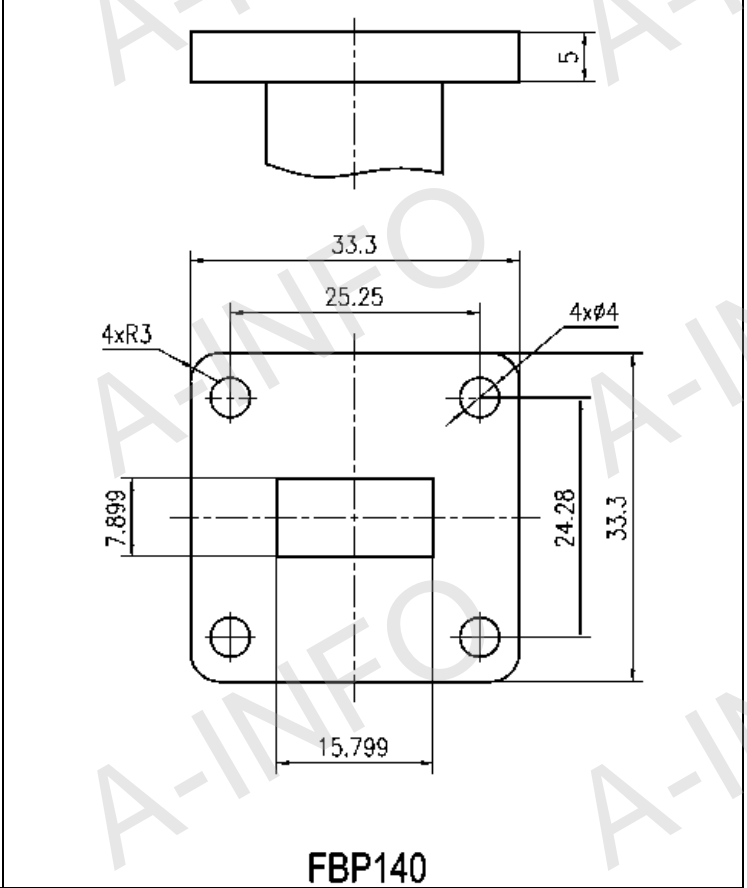
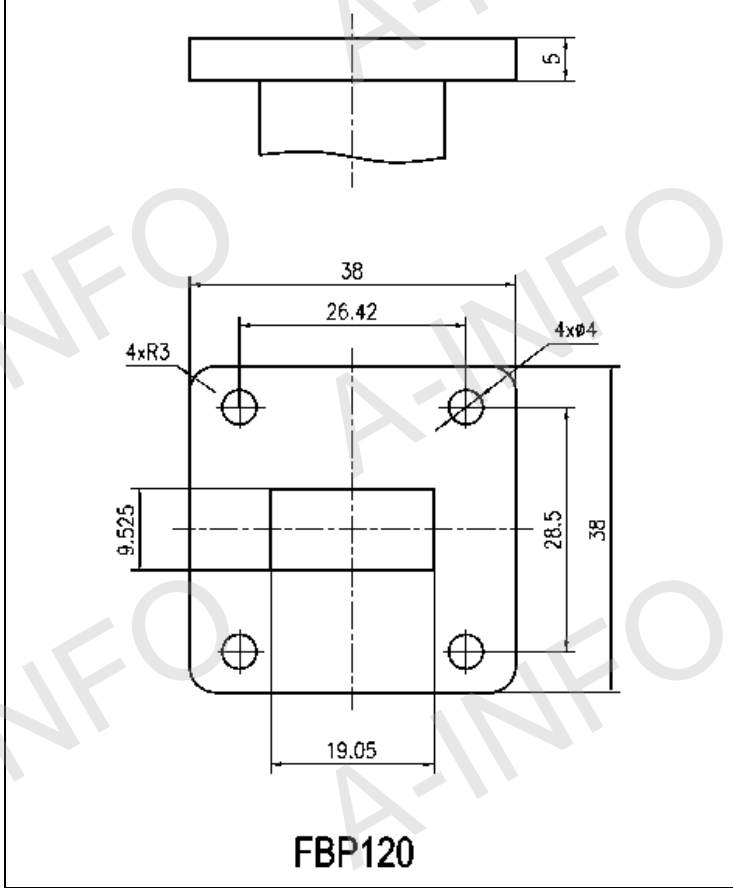
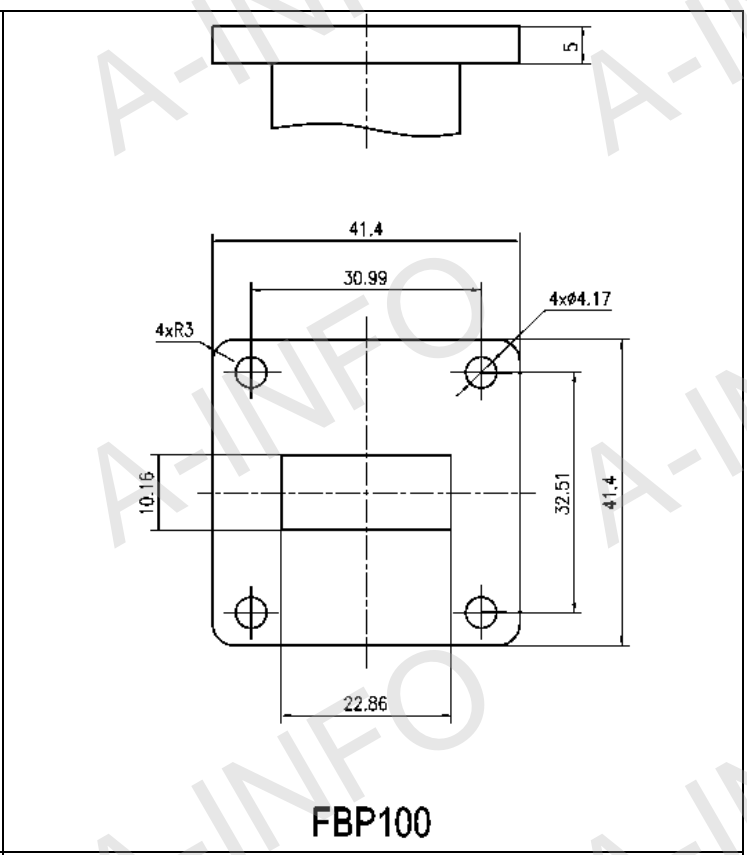
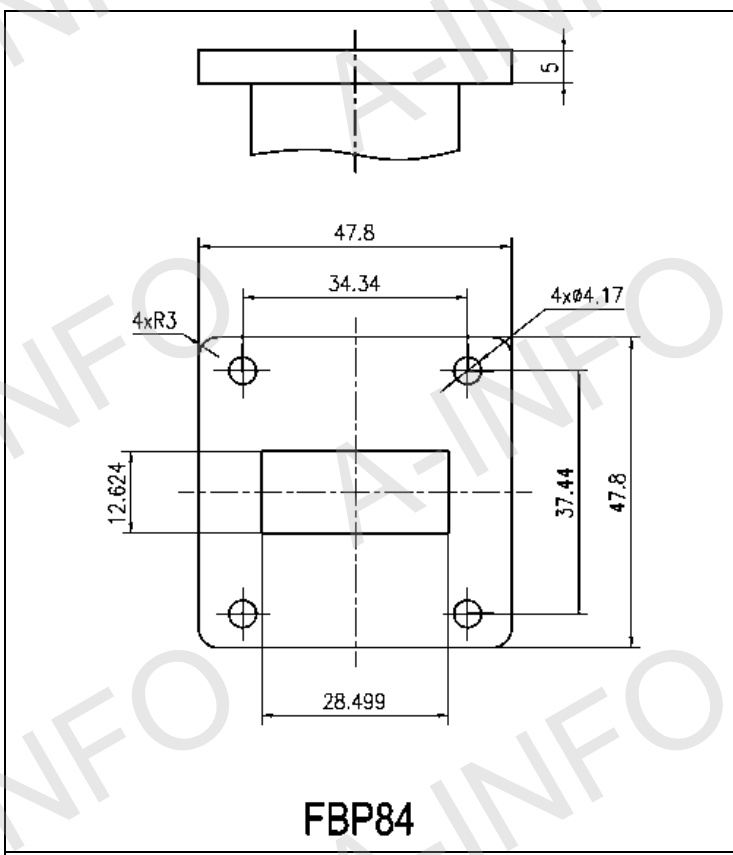


**FAP900**

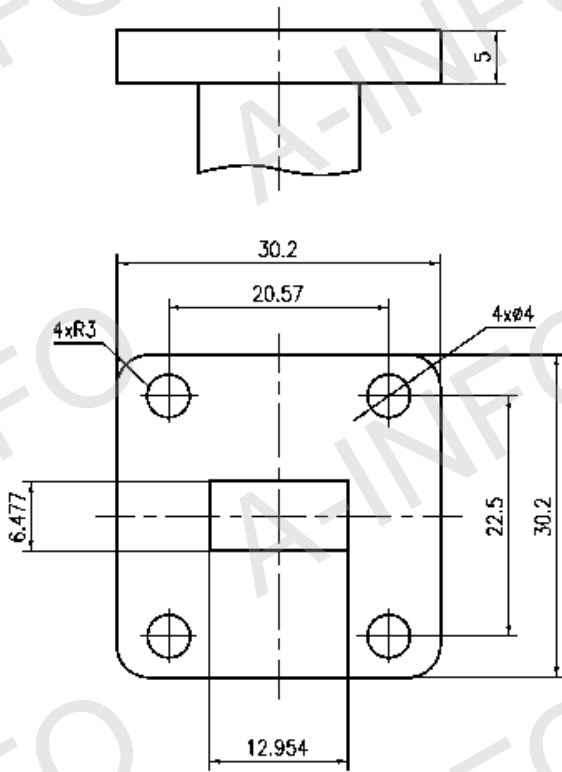




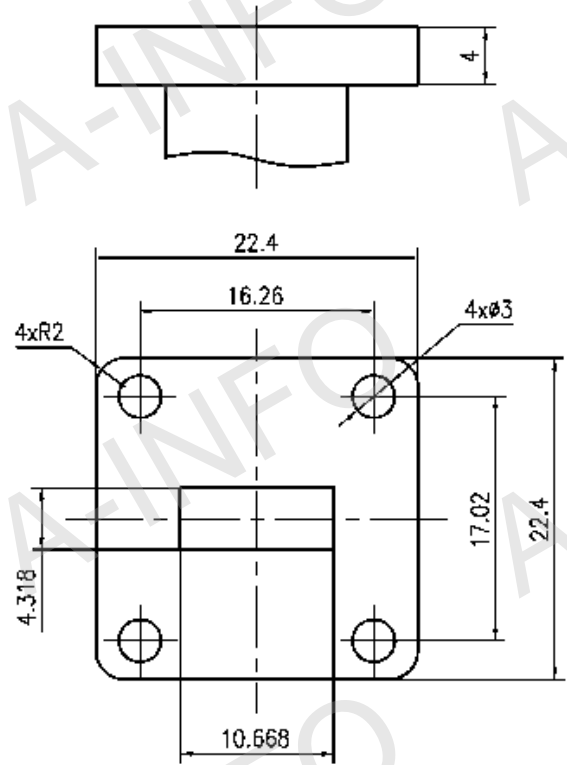
### 3.2 B Type Flange (FBP, FBM, FBE)



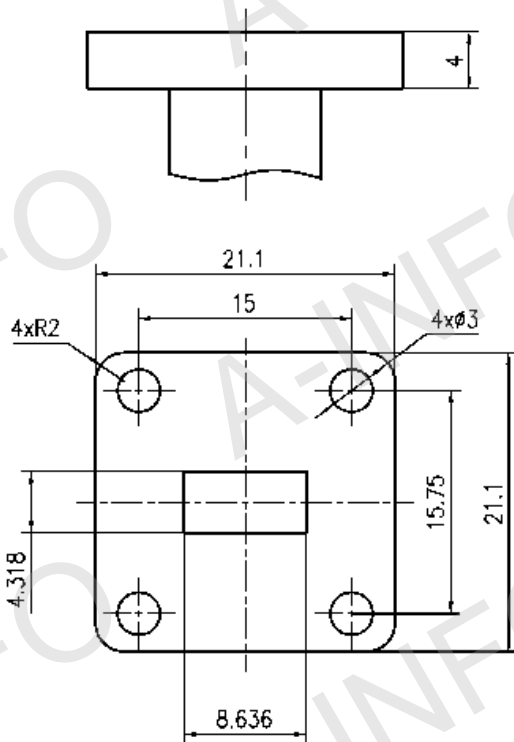




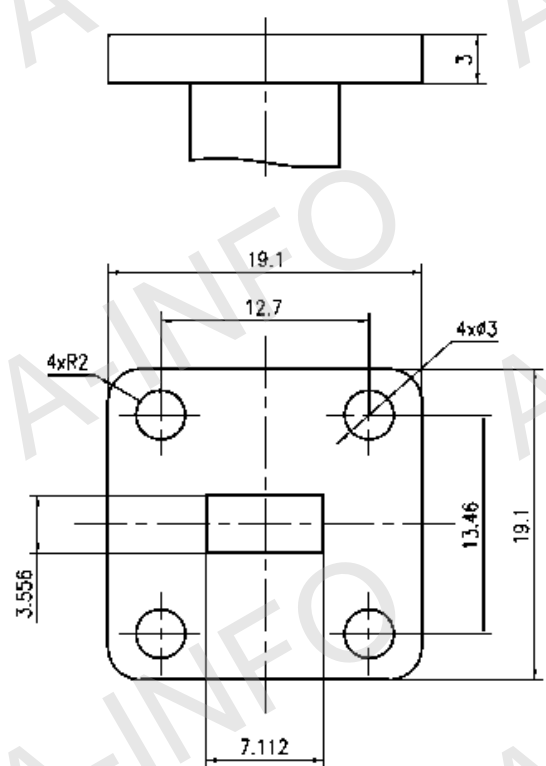
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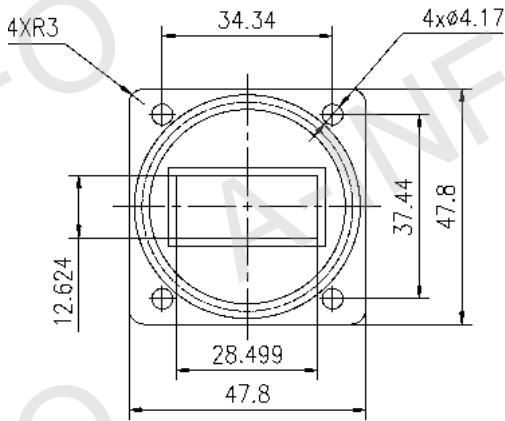
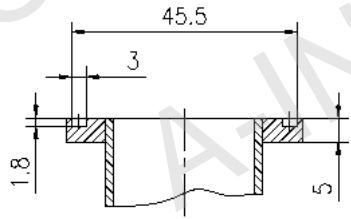
**FBP220**



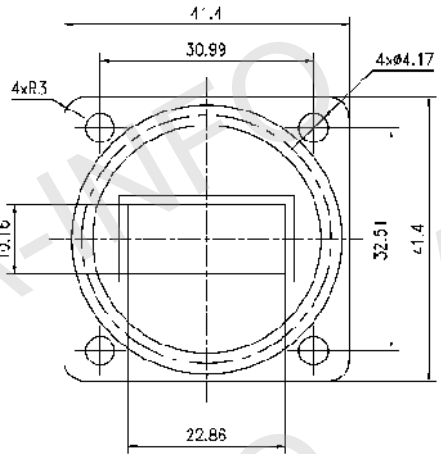
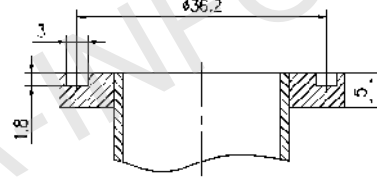
**FBP260**



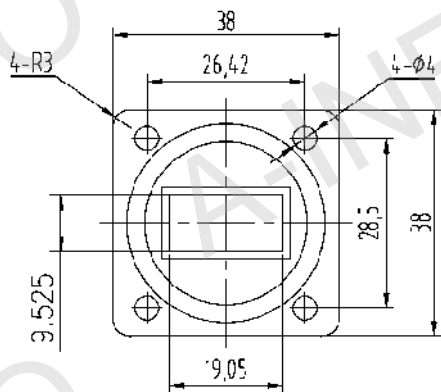
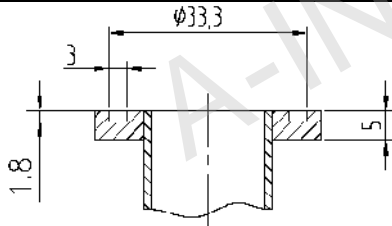
**FBP320**



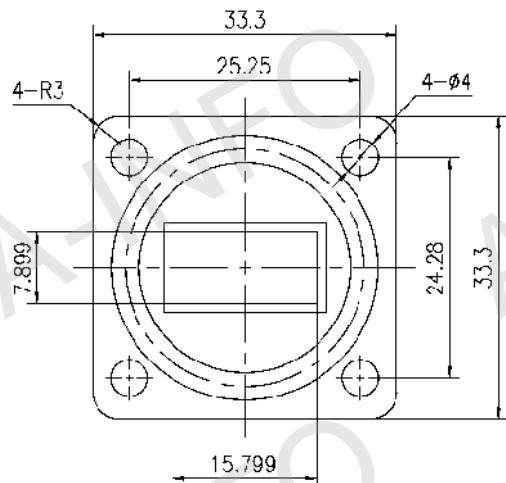
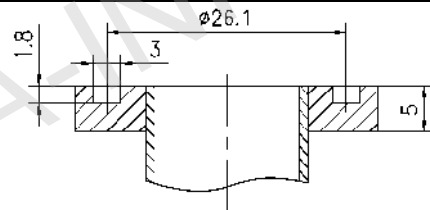
**FBM84**



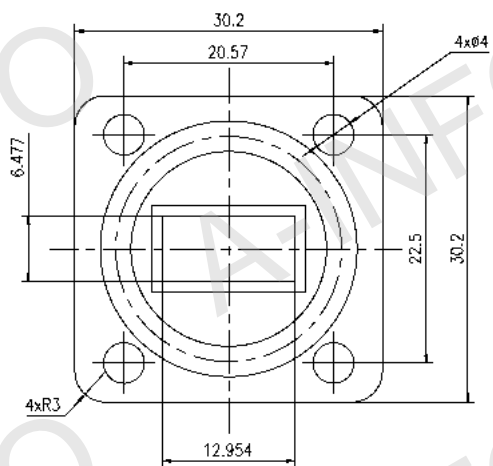
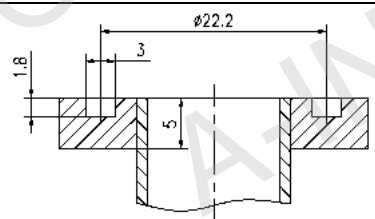
**FBM100**



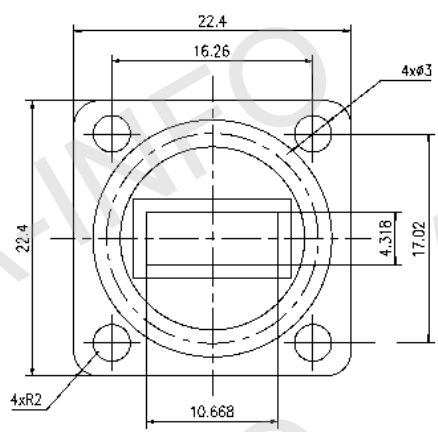
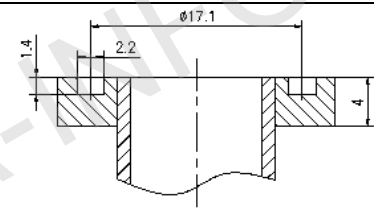
**FBM120**



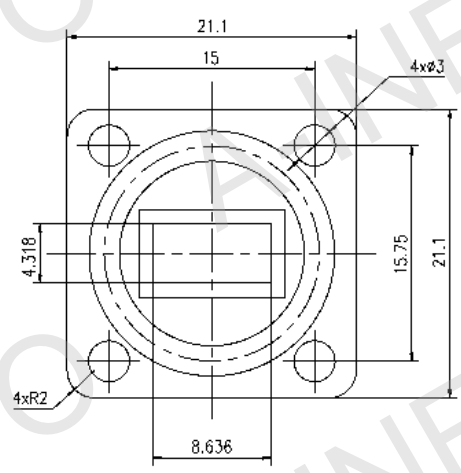
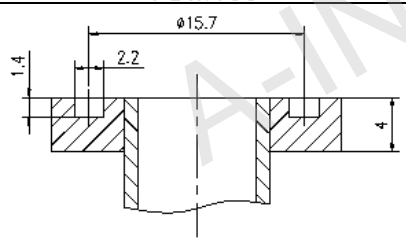
**FBM140**



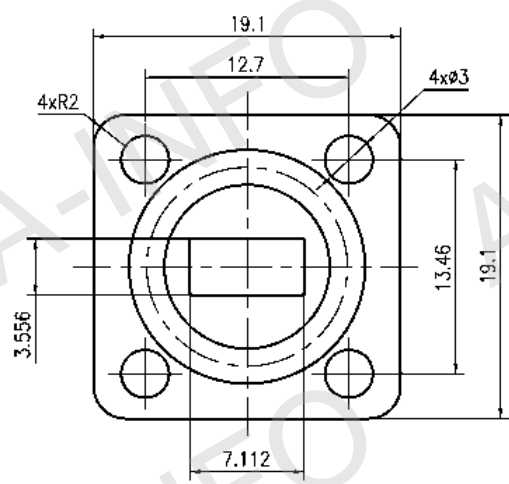
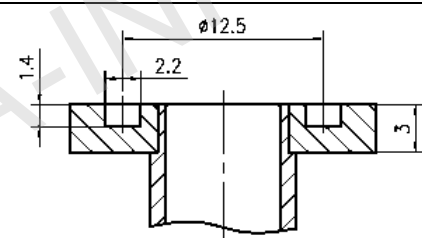
**FBM180**



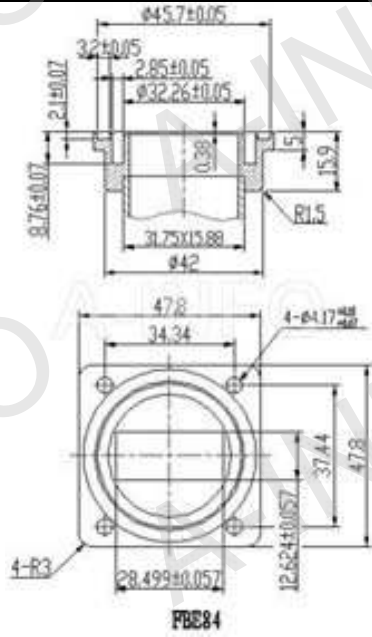
**FBM220**



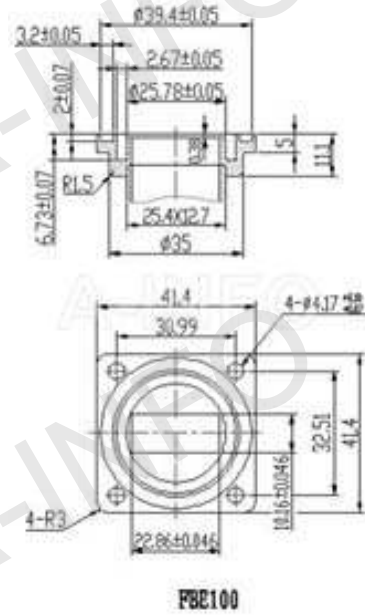
**FBM260**



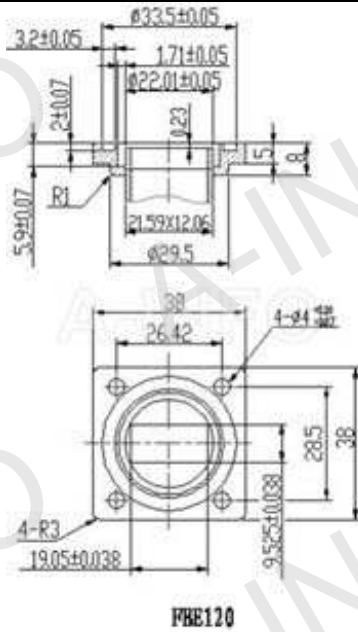
**FBM320**



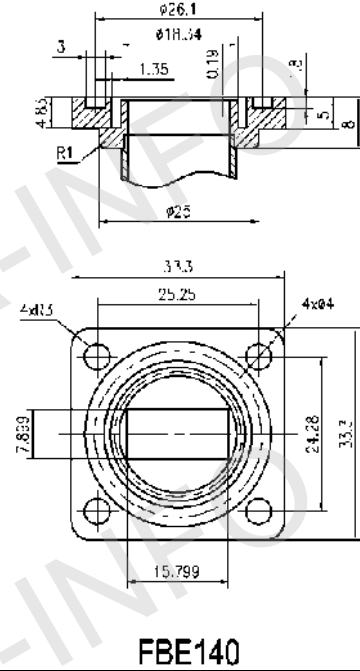
FBE84



FBE100



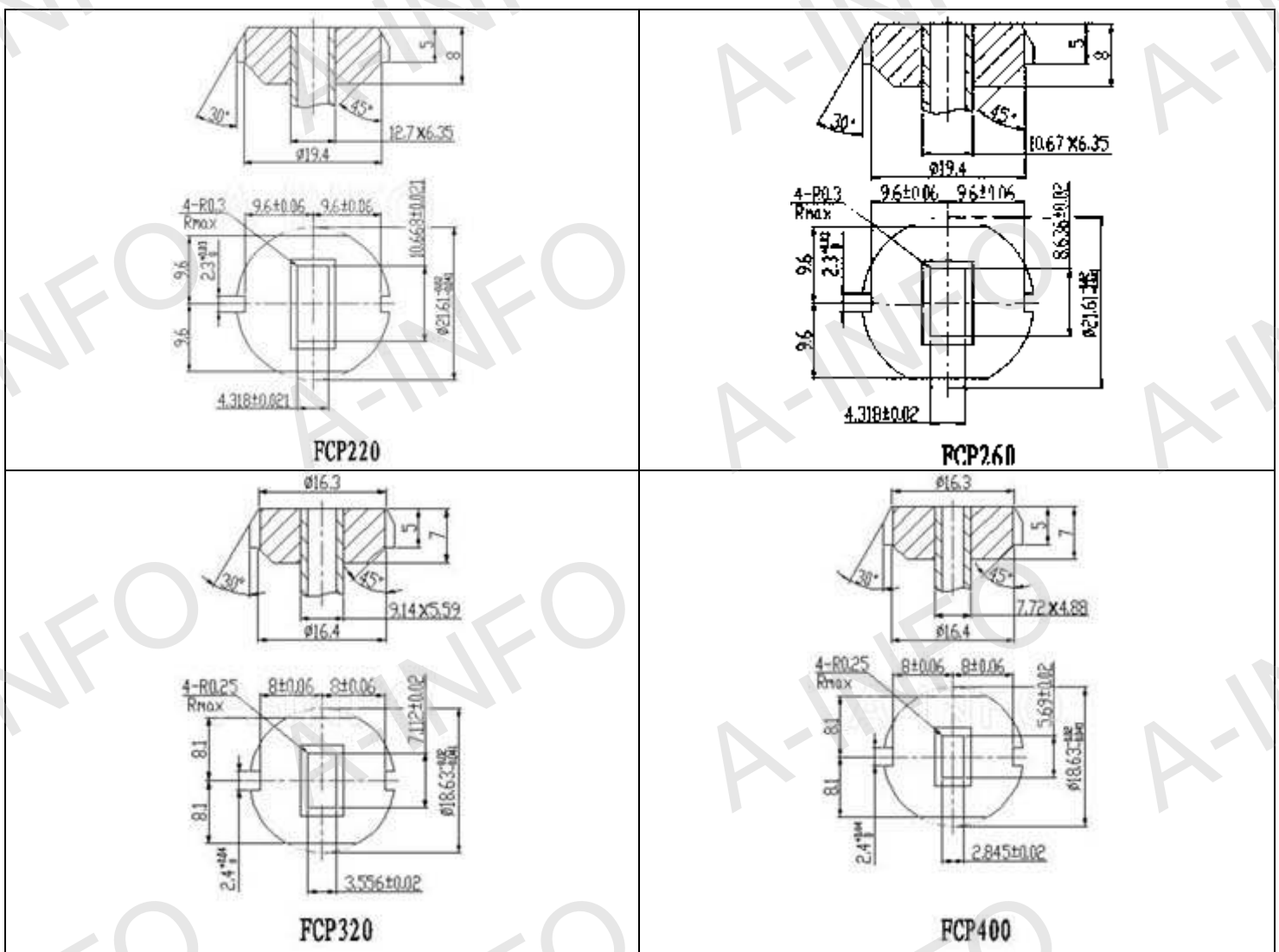
FBE120

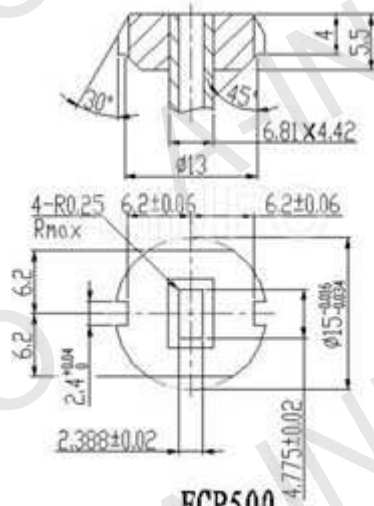


FBE140

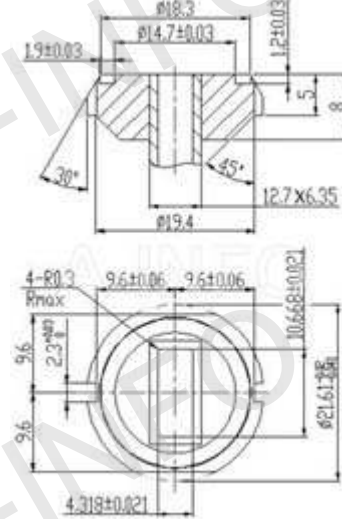


### 3.3 C Type Flange (FCP, FCM)

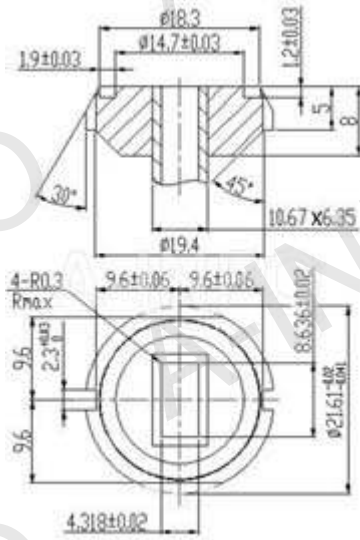




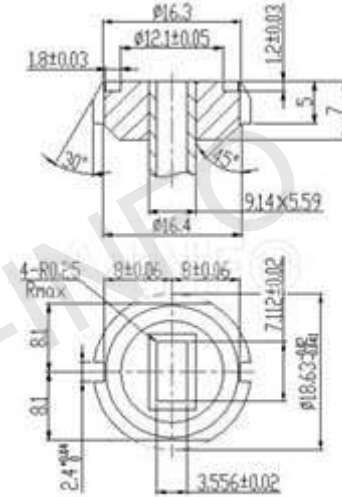
FCP500



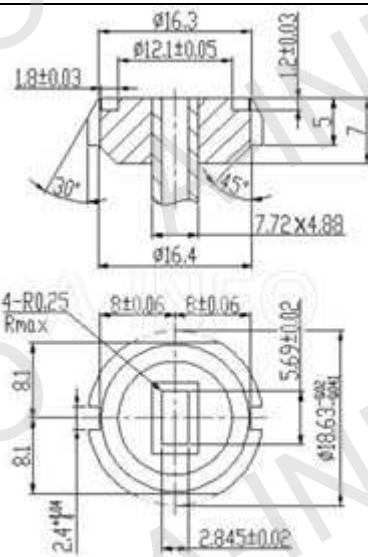
FCM220



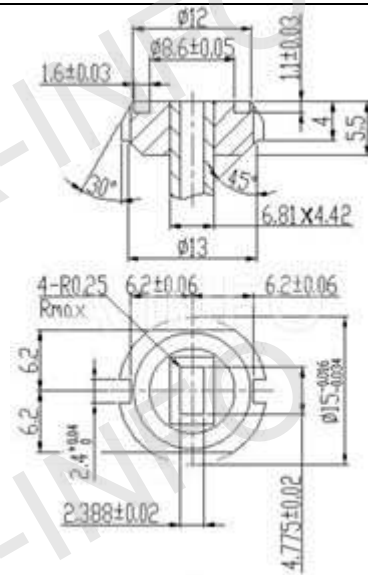
FCM260



FCM320

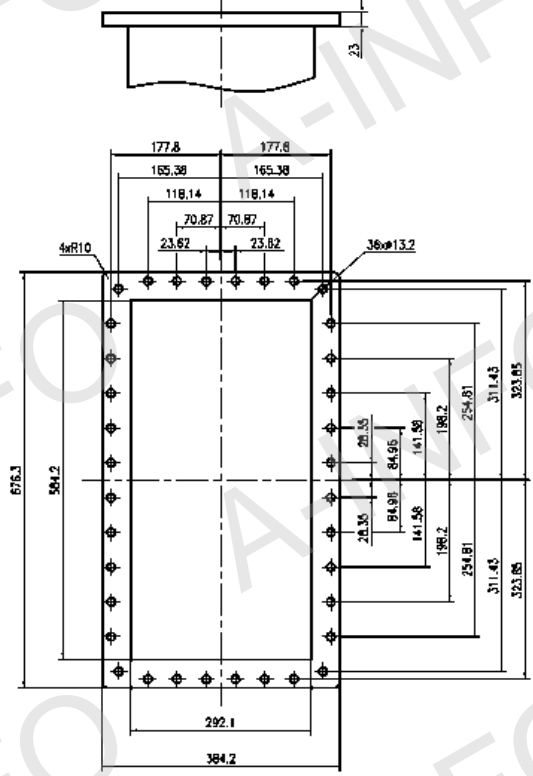


FCM400

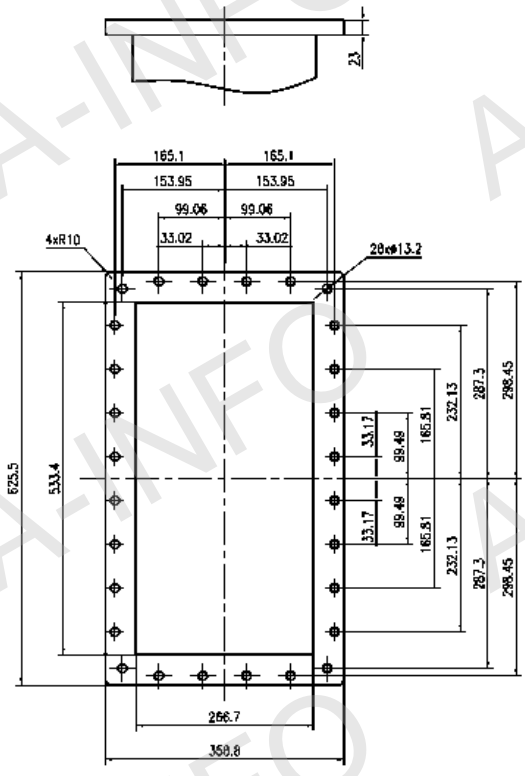


FCM500

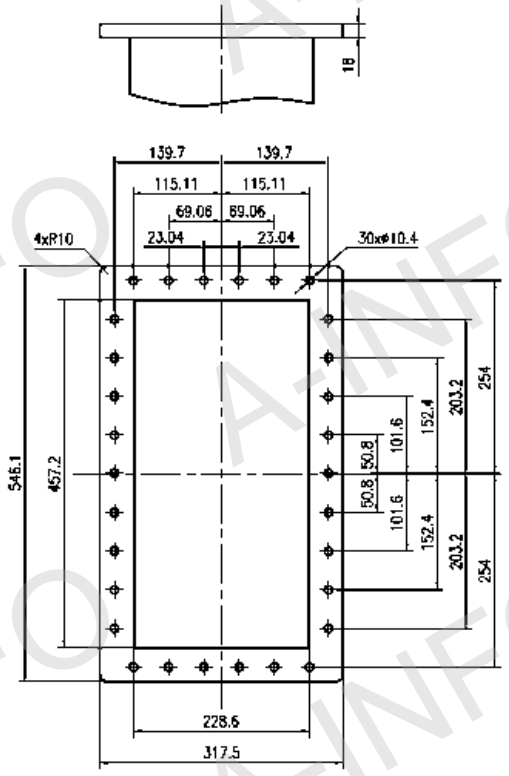
### 3.4 D Type Flange (FDP, FDM)



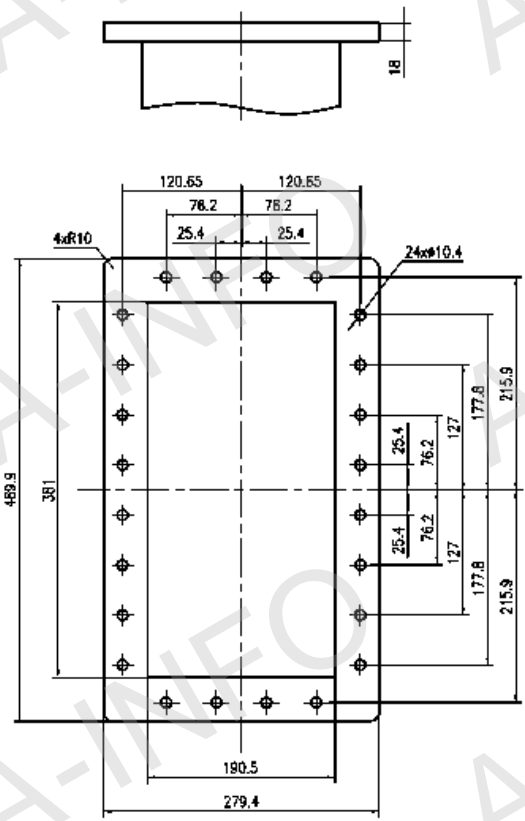
FDP3



FDP4

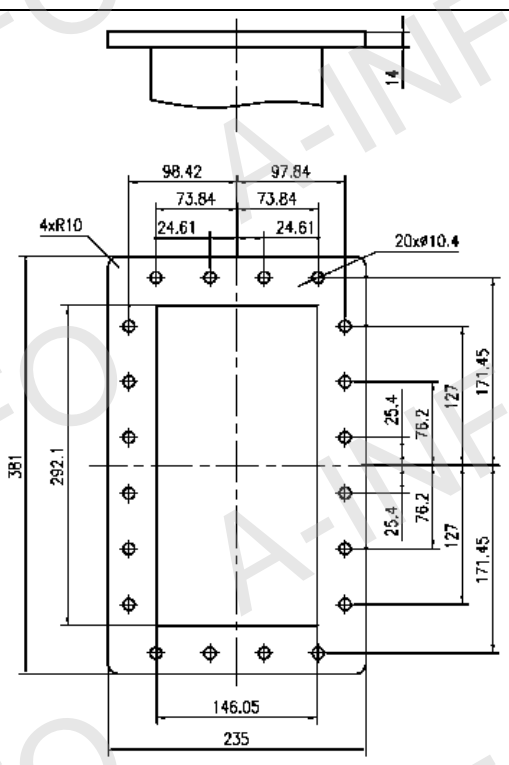


FDP5

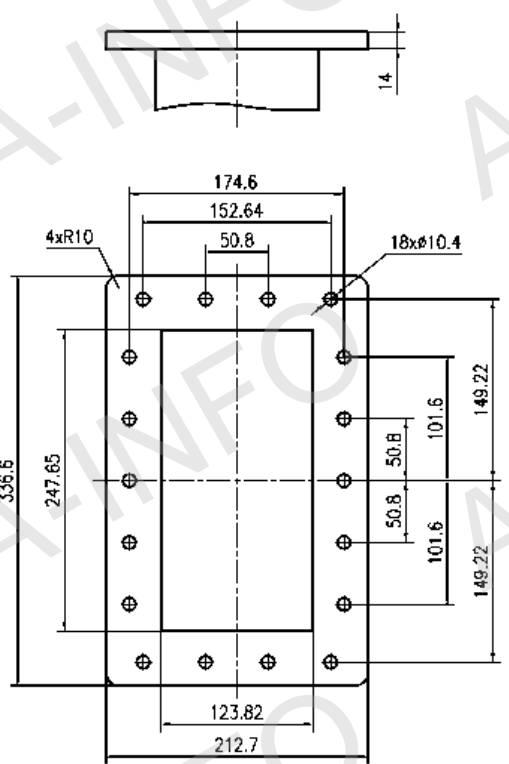


FDP6

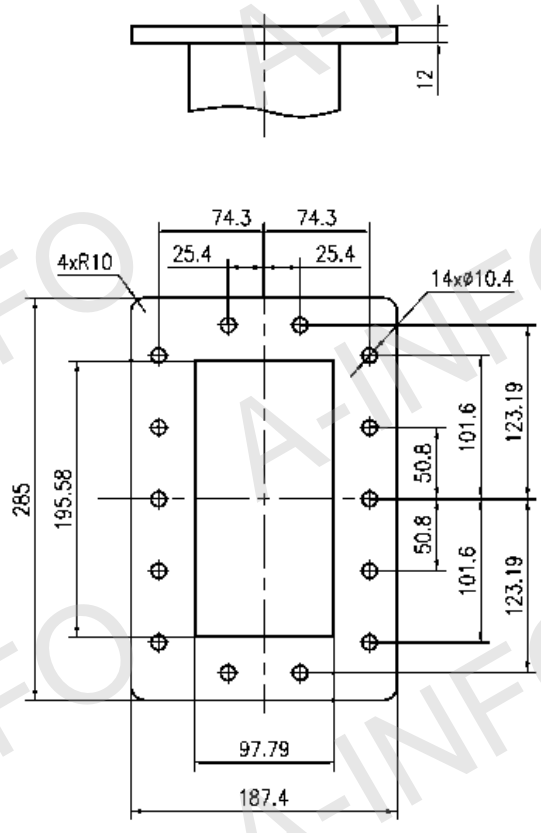




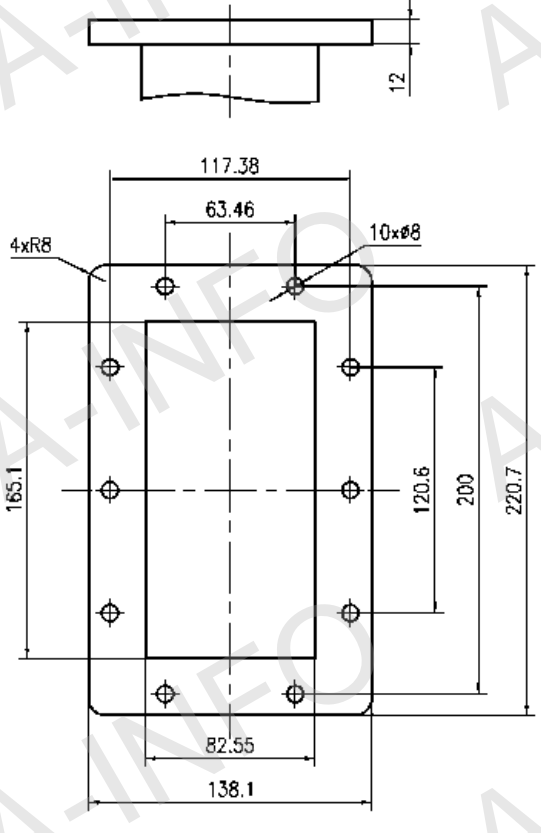
FDP8



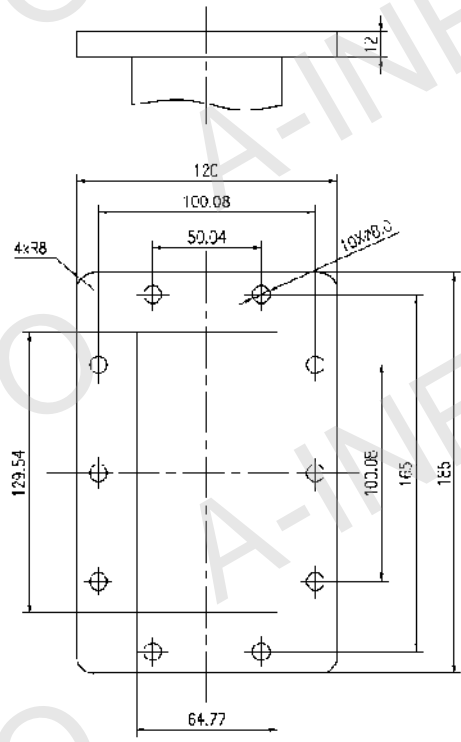
FDP9



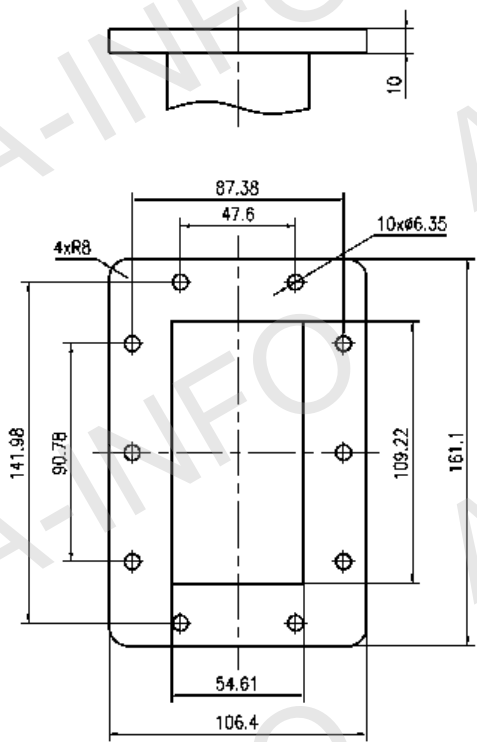
FDP12



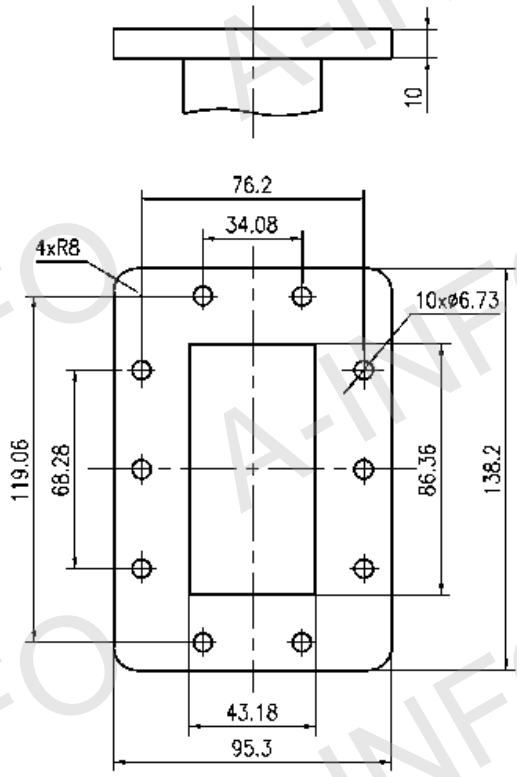
FDP14



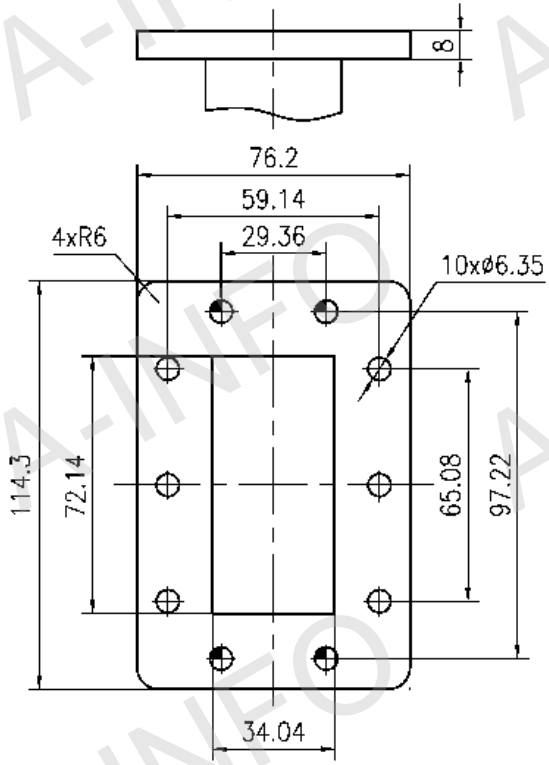
FDP18



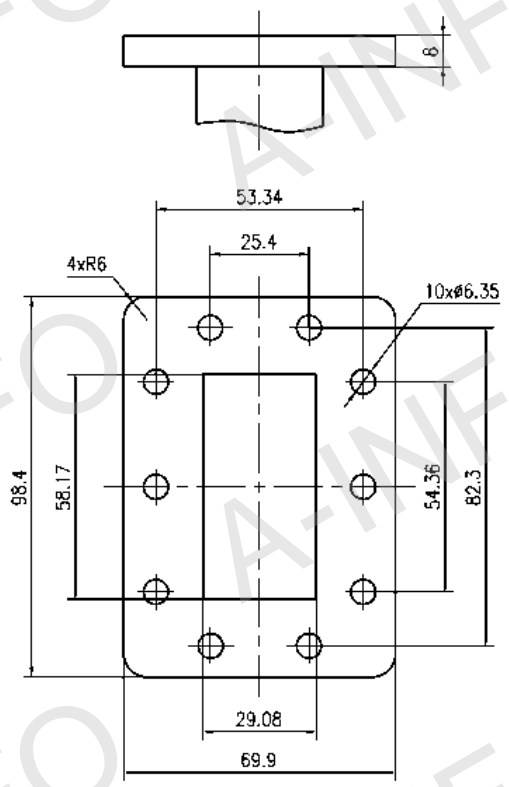
FDP22



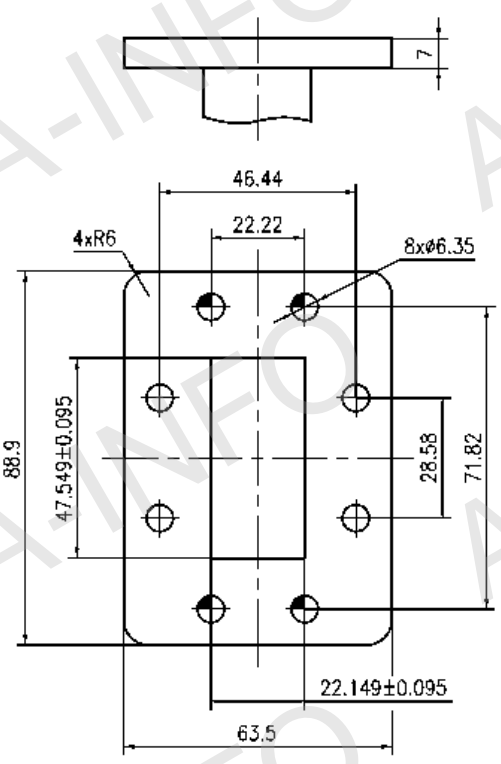
FDP26



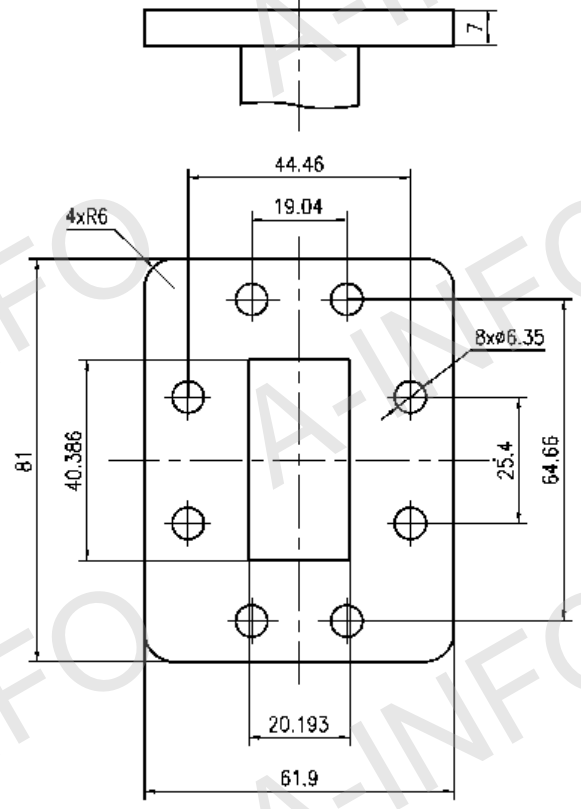
FDP32



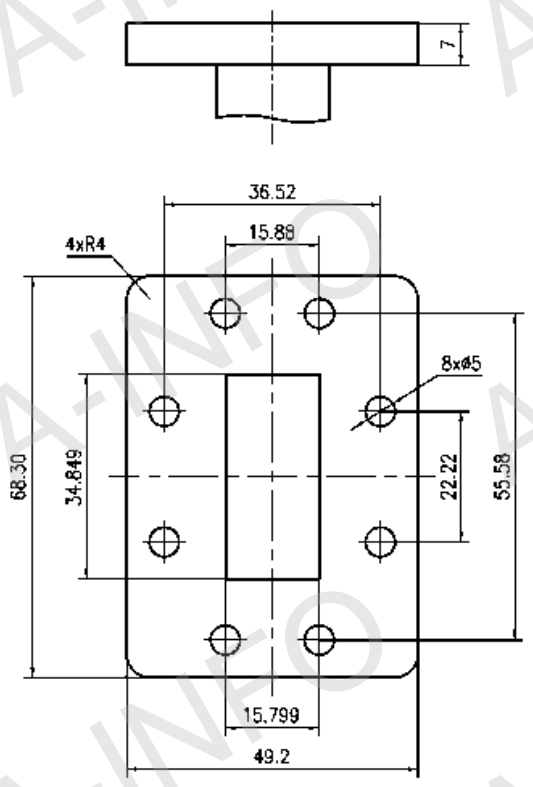
FDP40



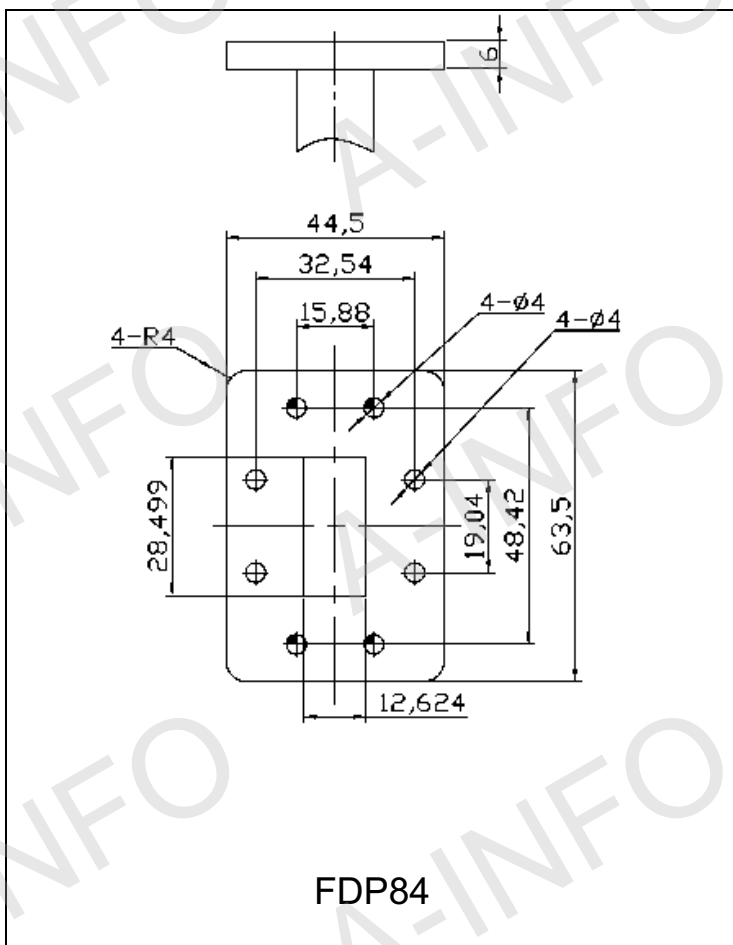
FDP48



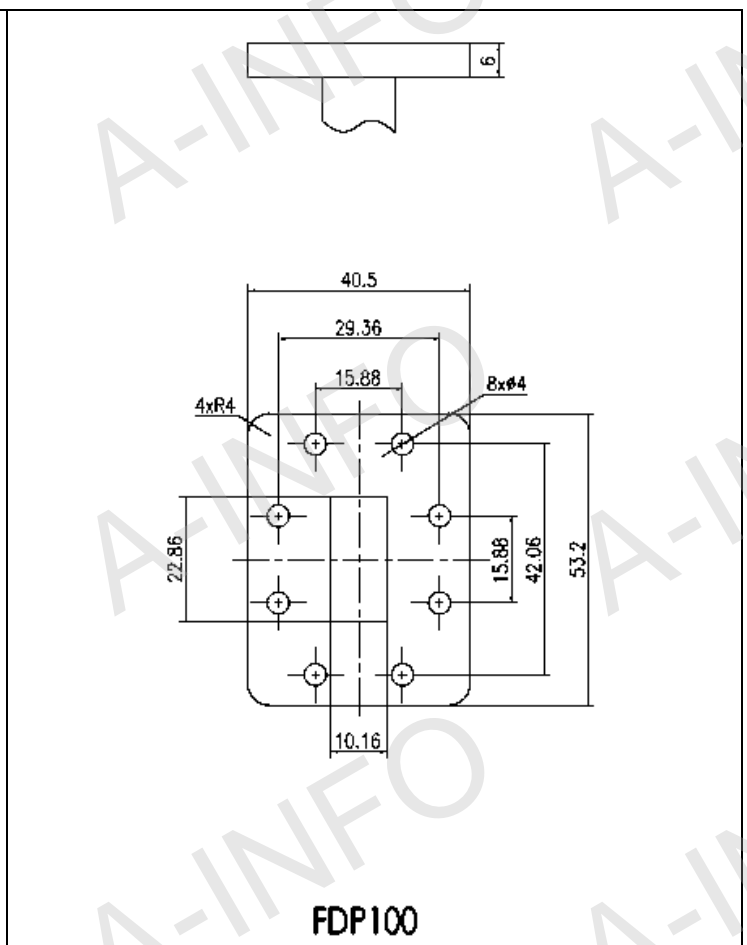
FDP58



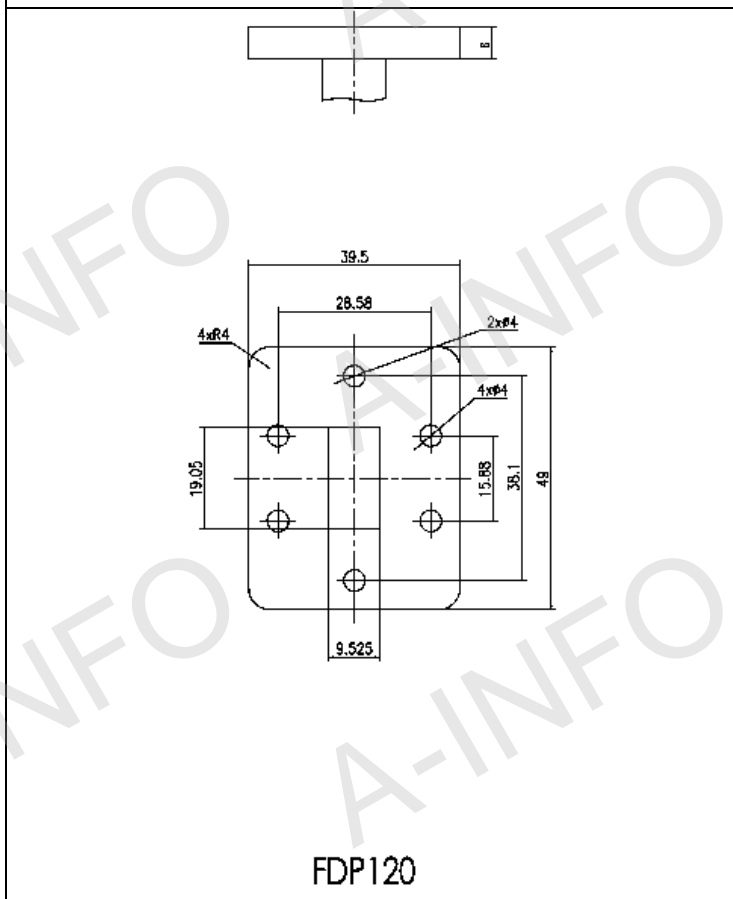
FDP70



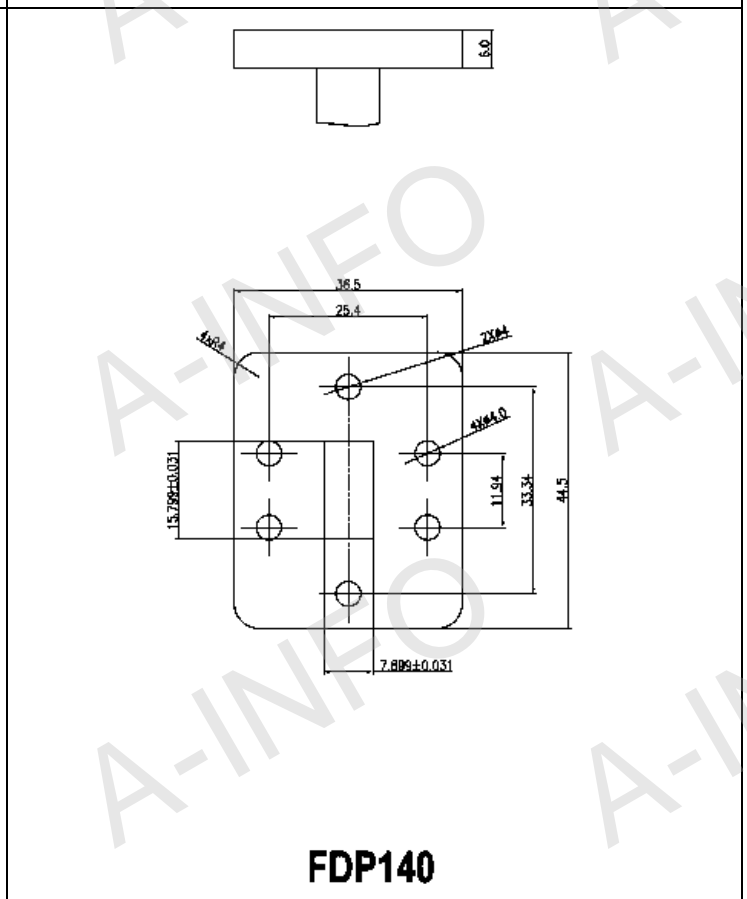
FDP84



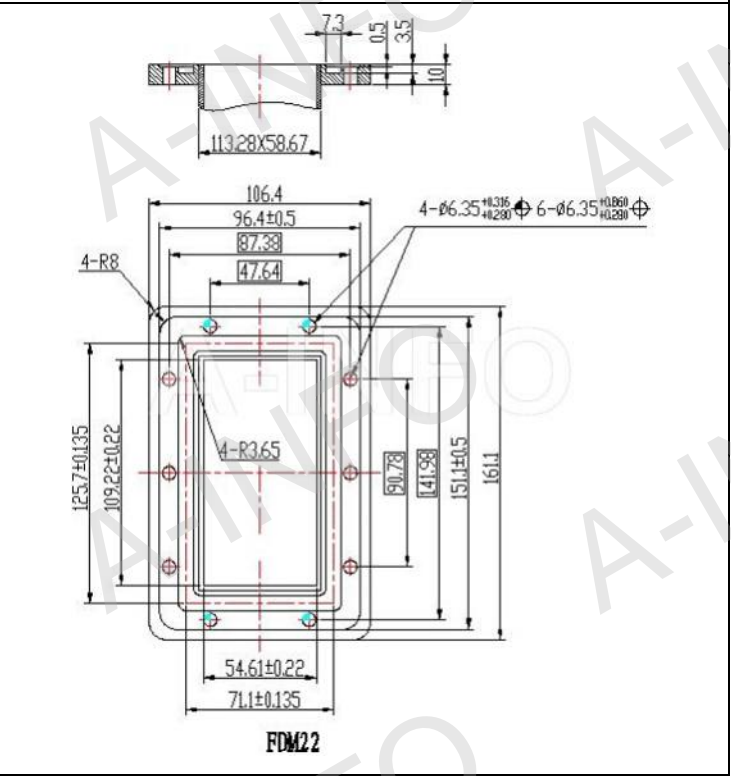
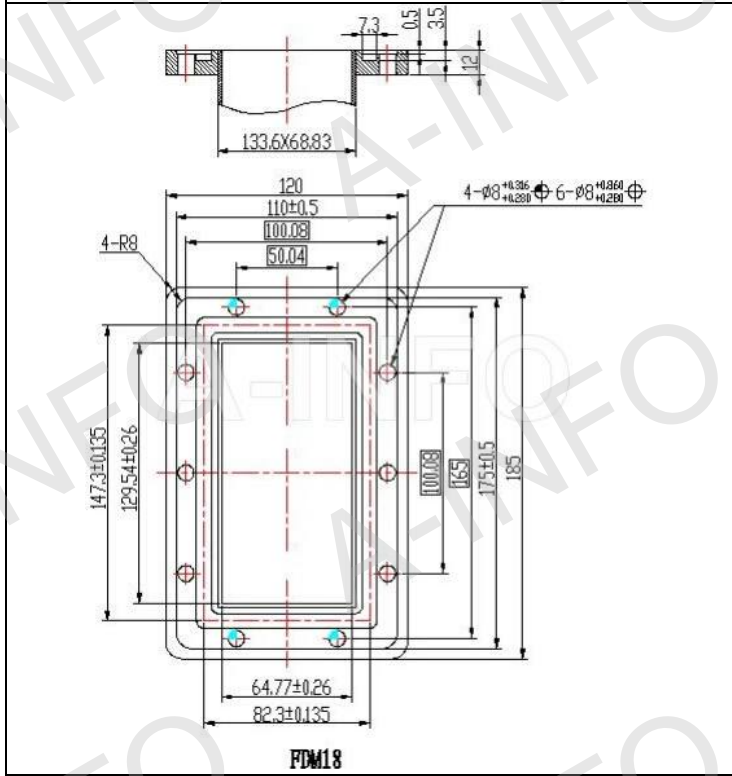
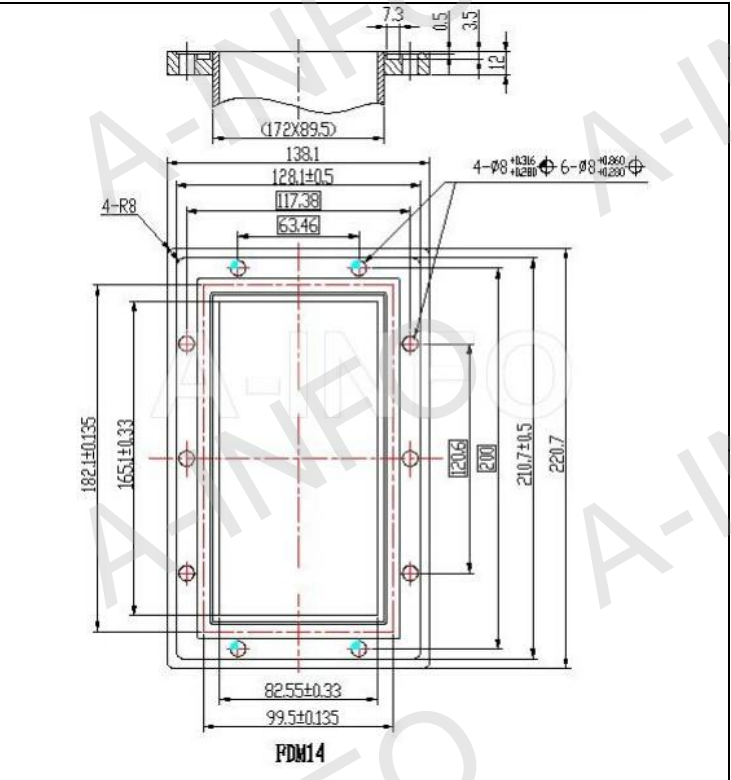
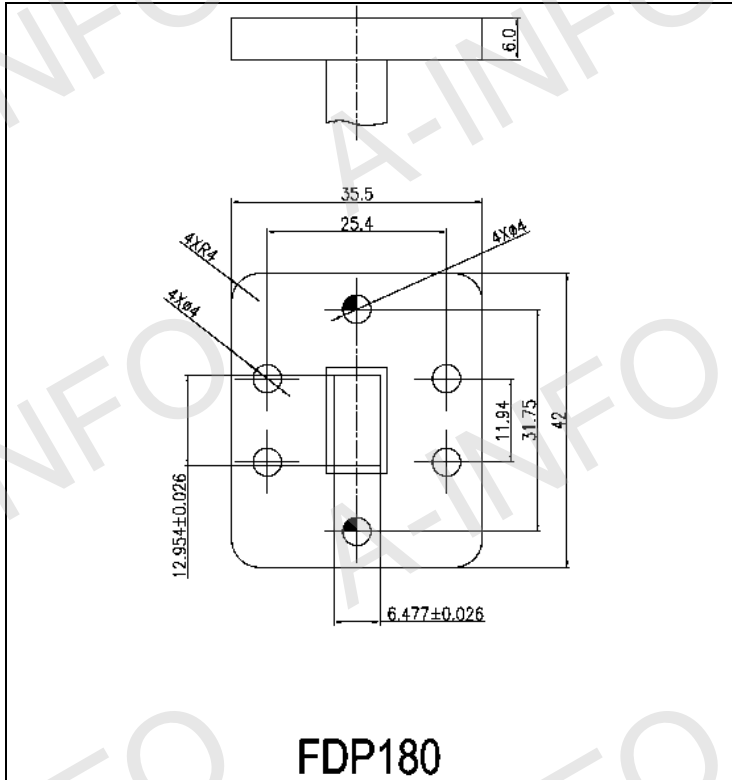
FDP100

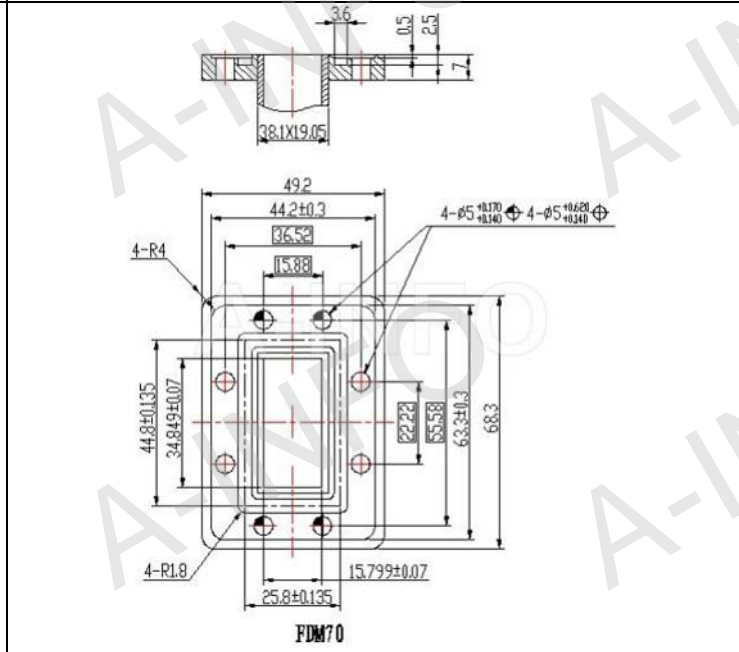
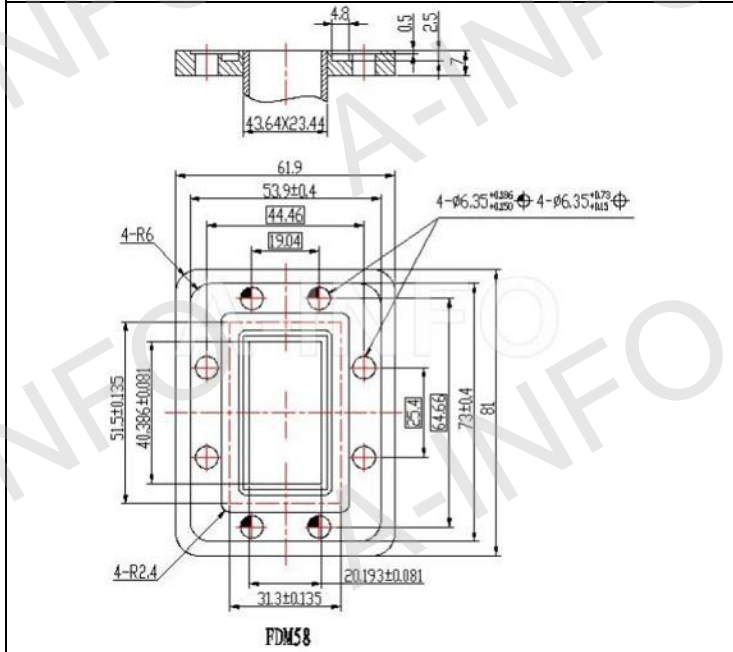
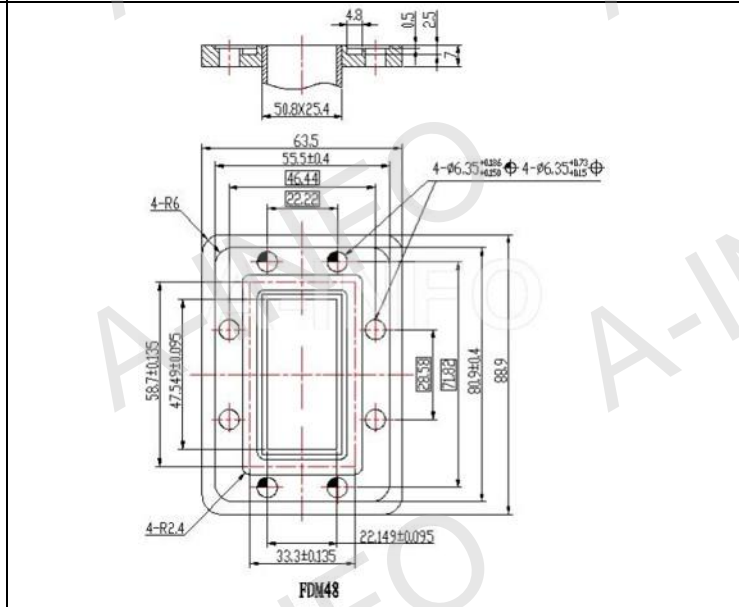
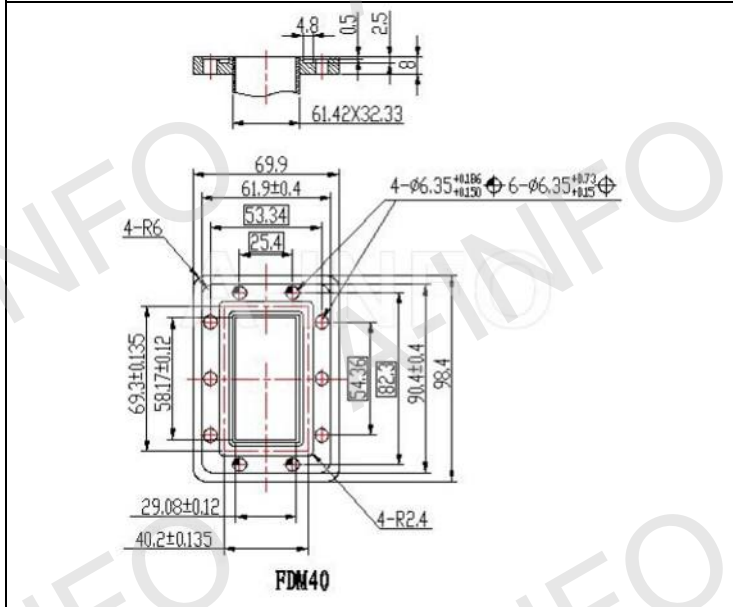
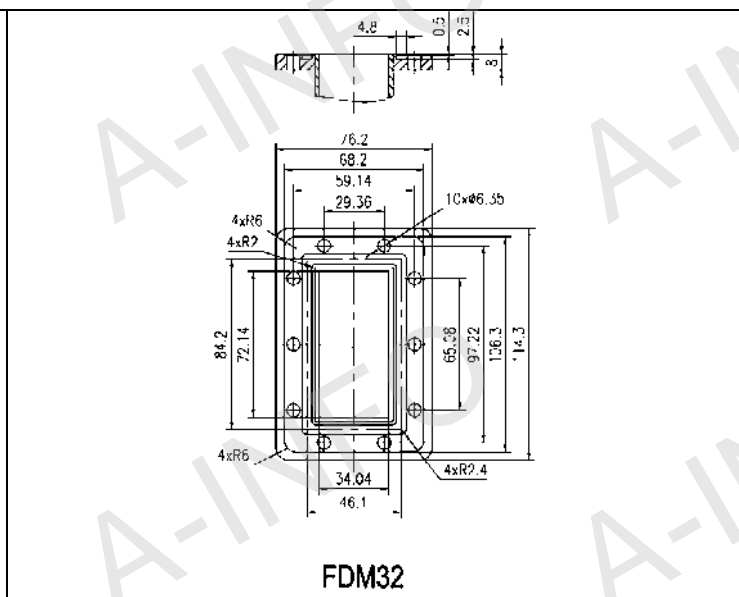
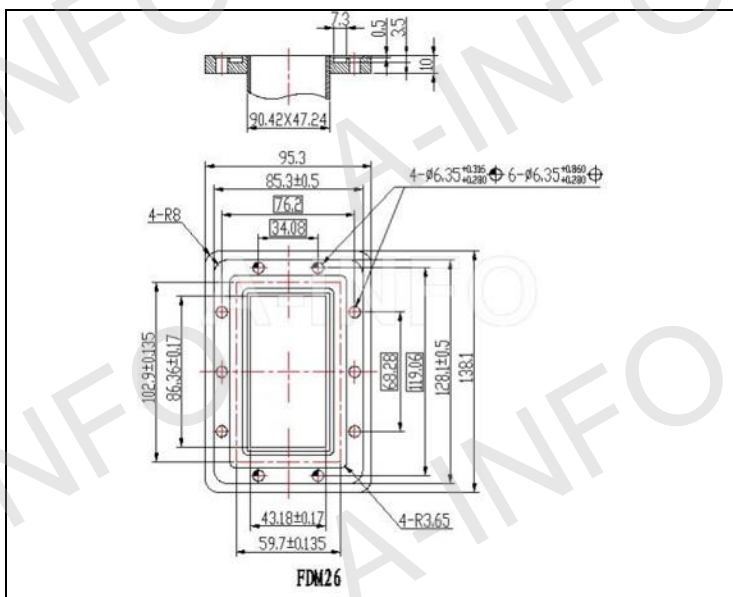


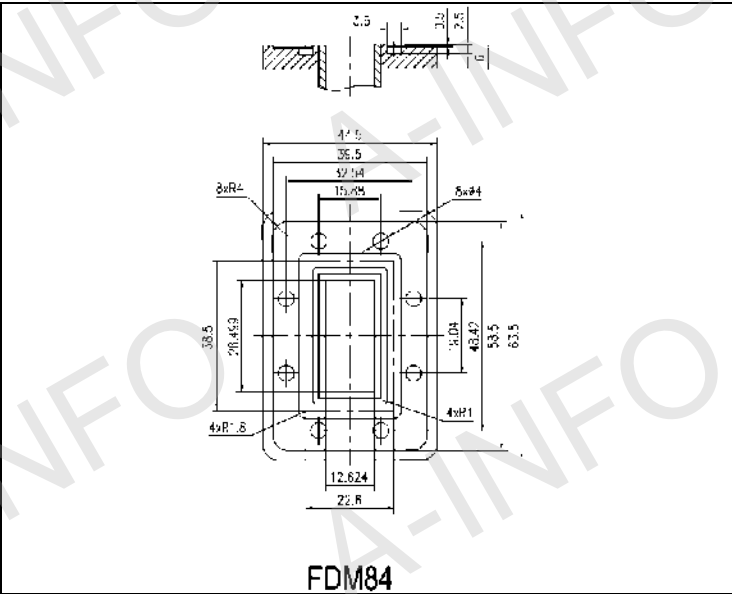
FDP120



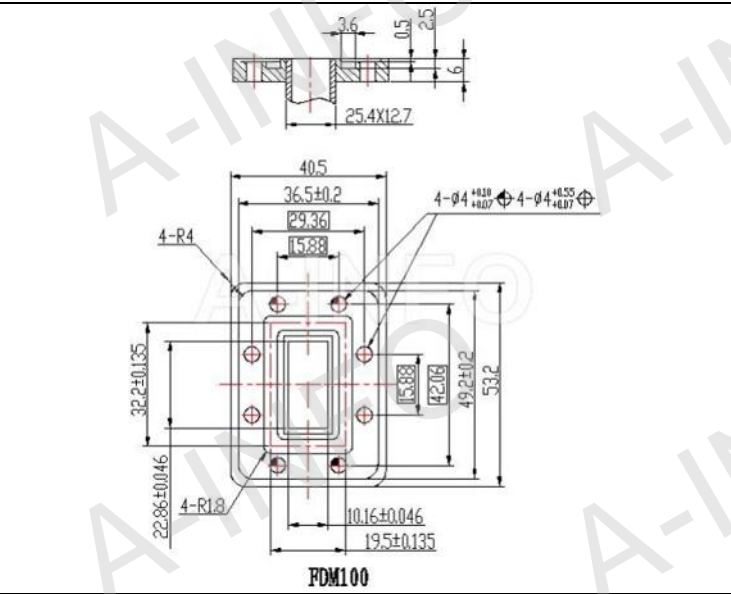
FDP140



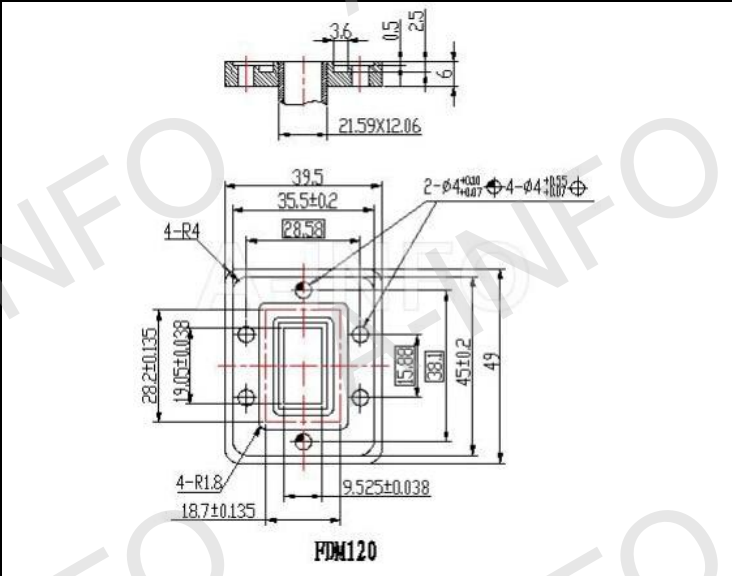




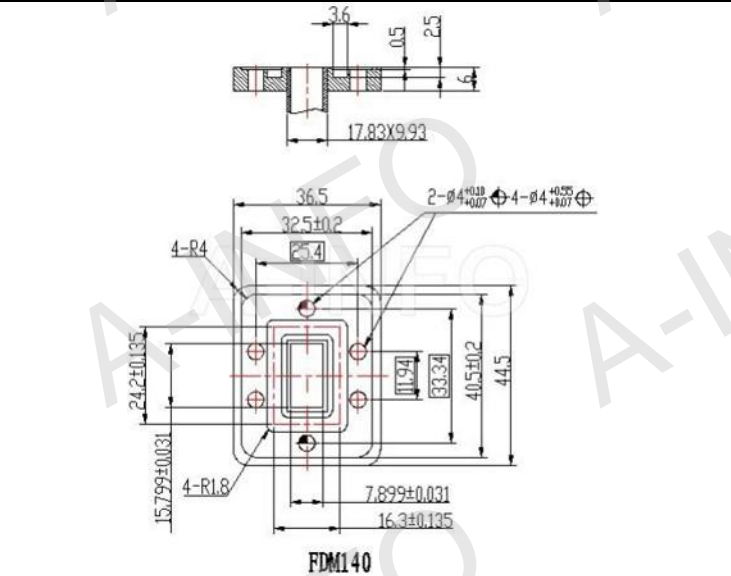
FDM84



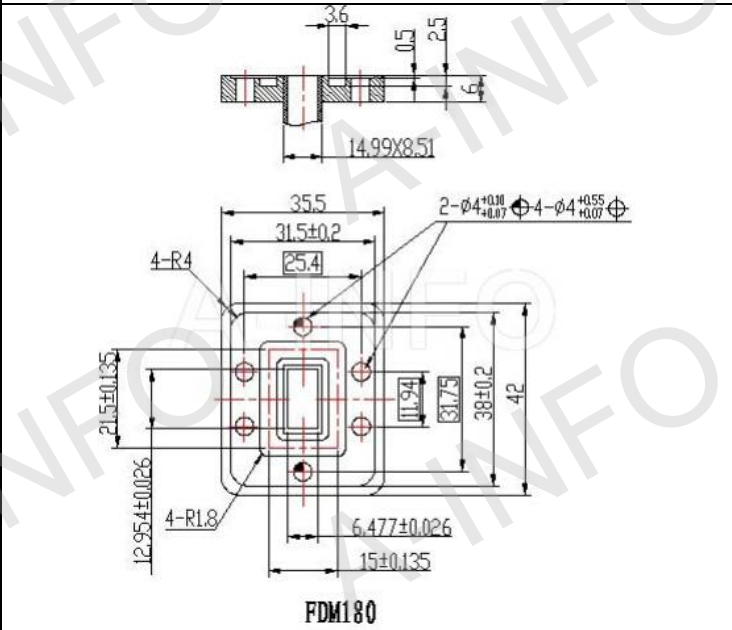
FDM100



FDM120

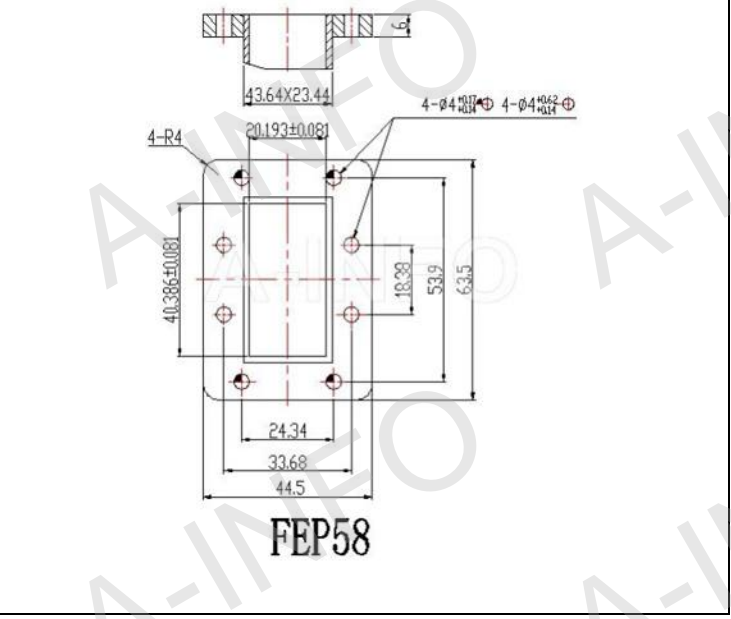
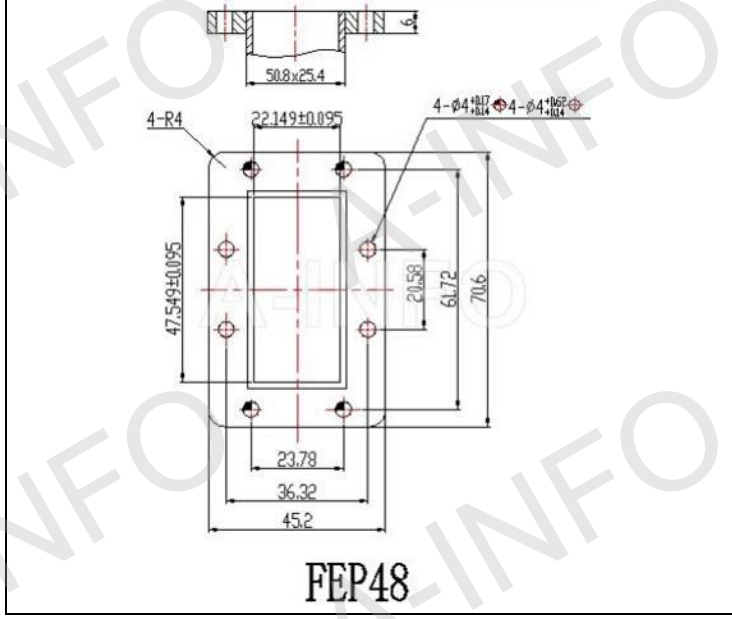
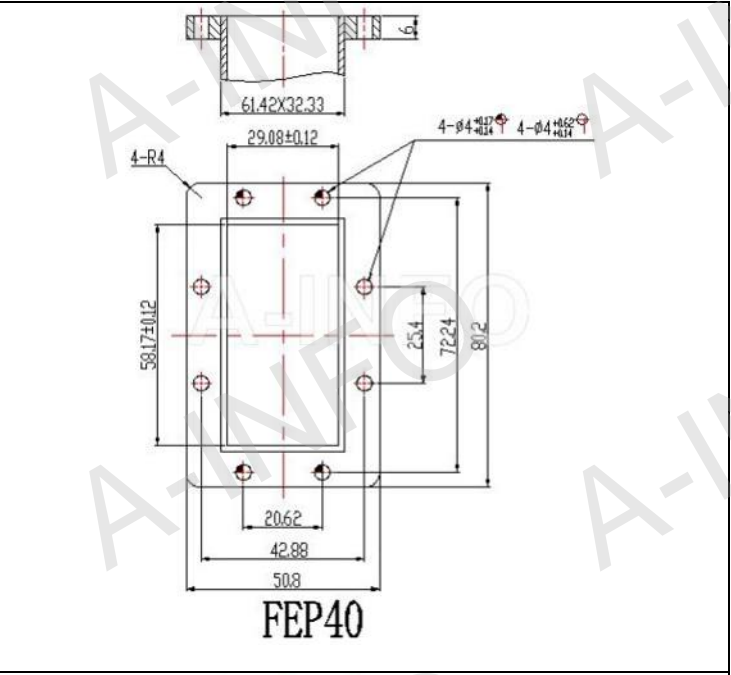
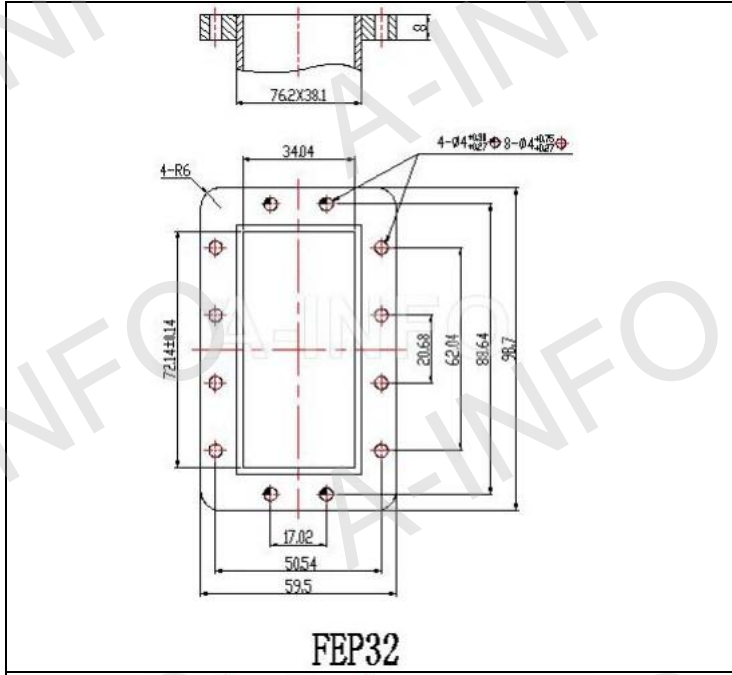


FDM140

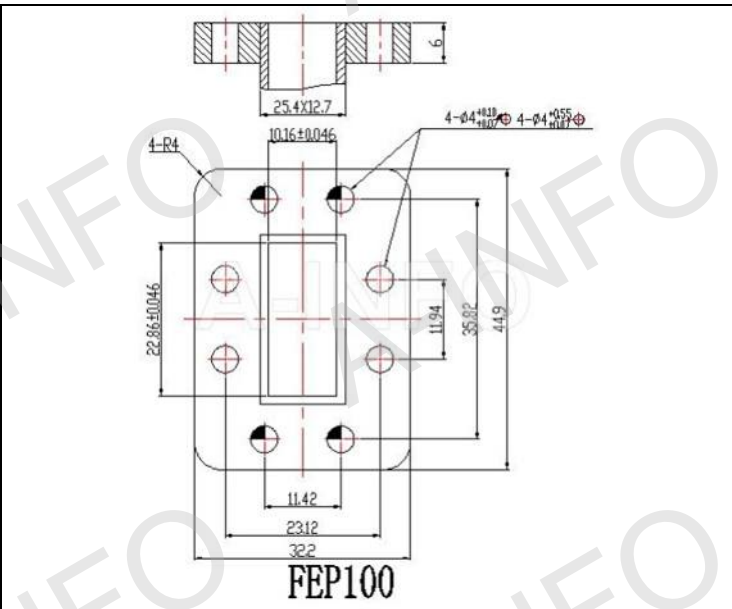
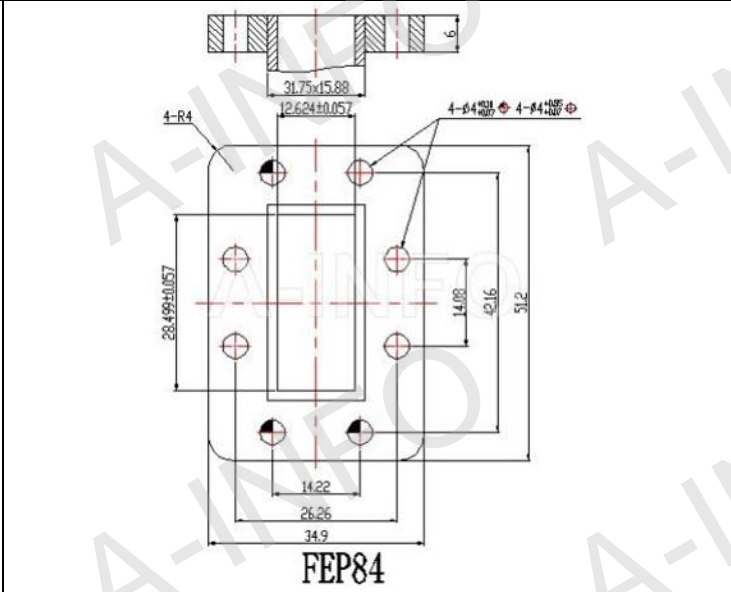
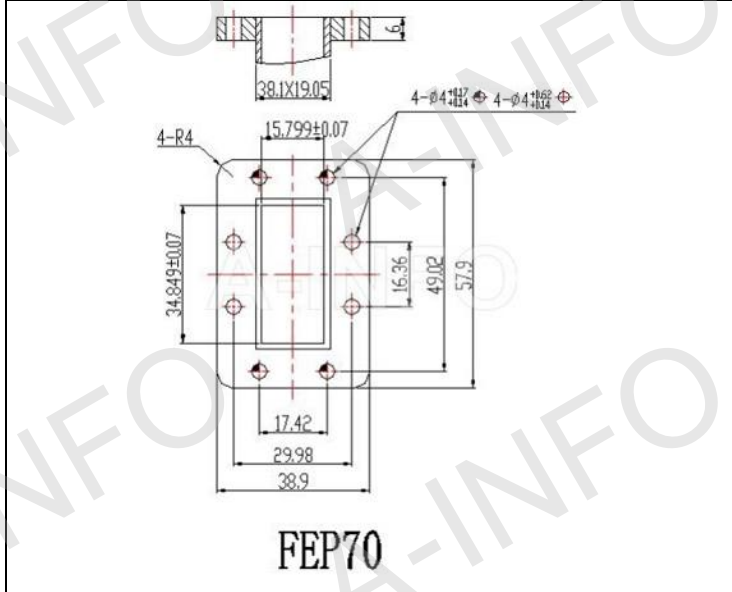


FDM180

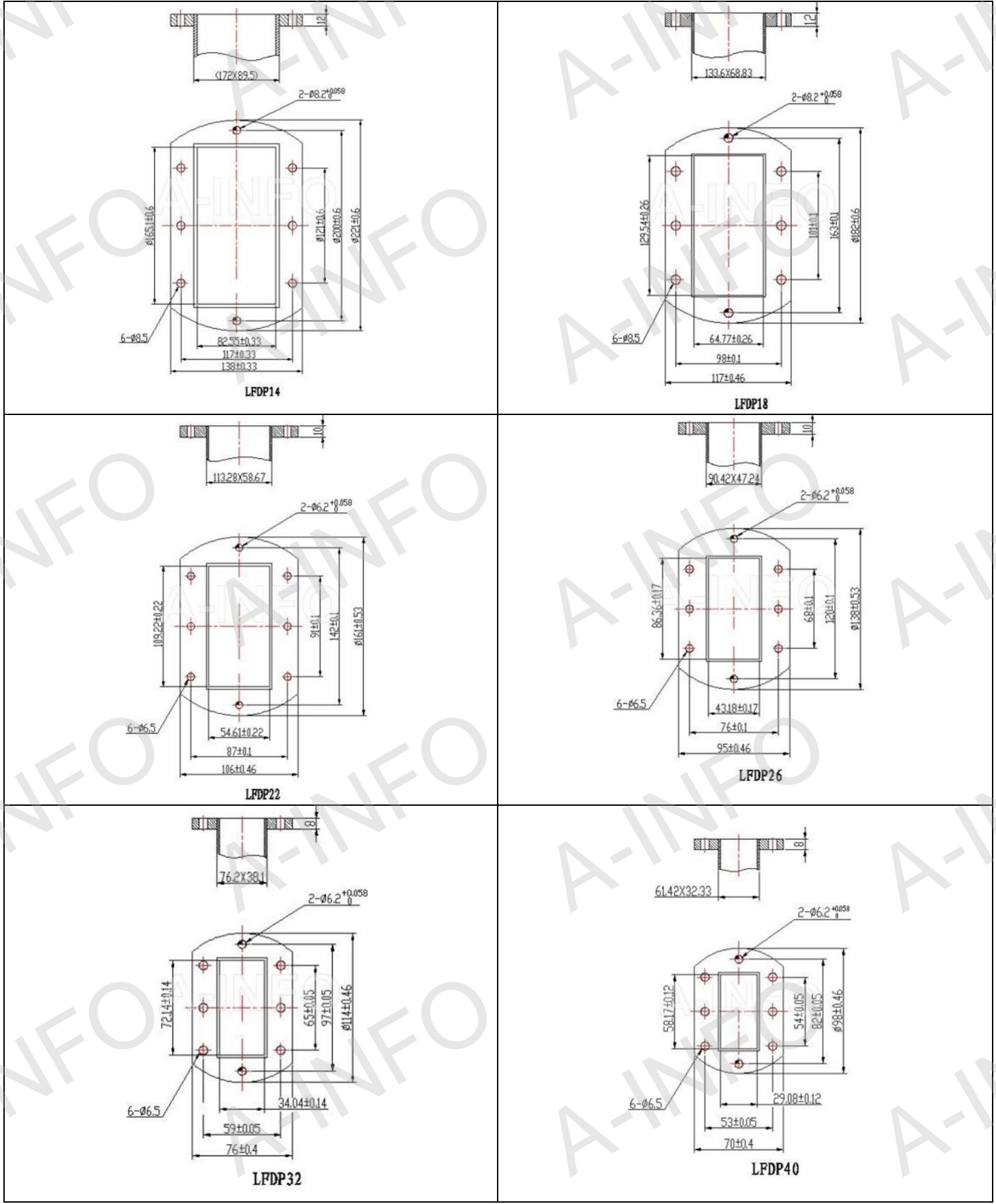
### 3.5 E Type Flange (FEP)

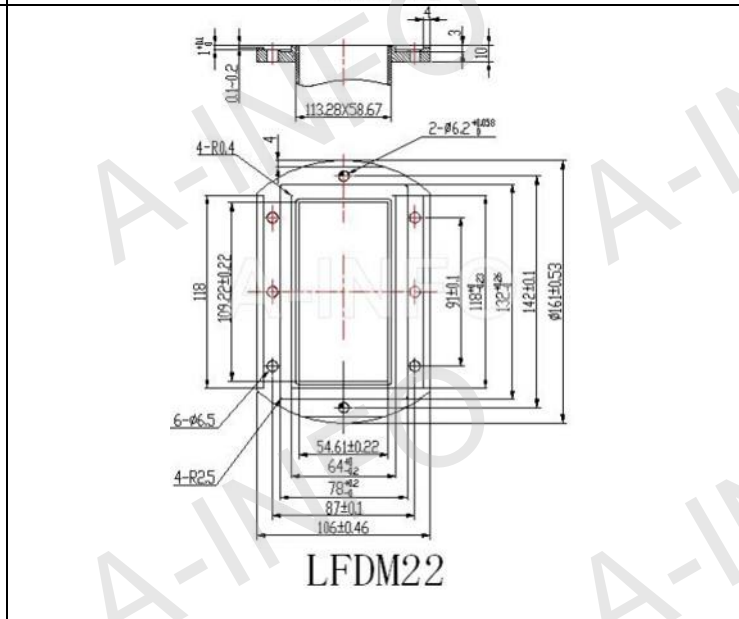
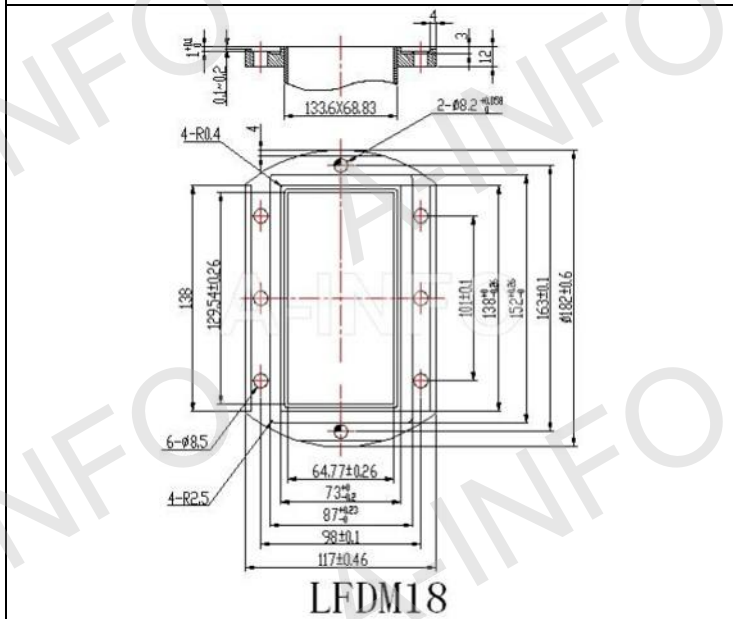
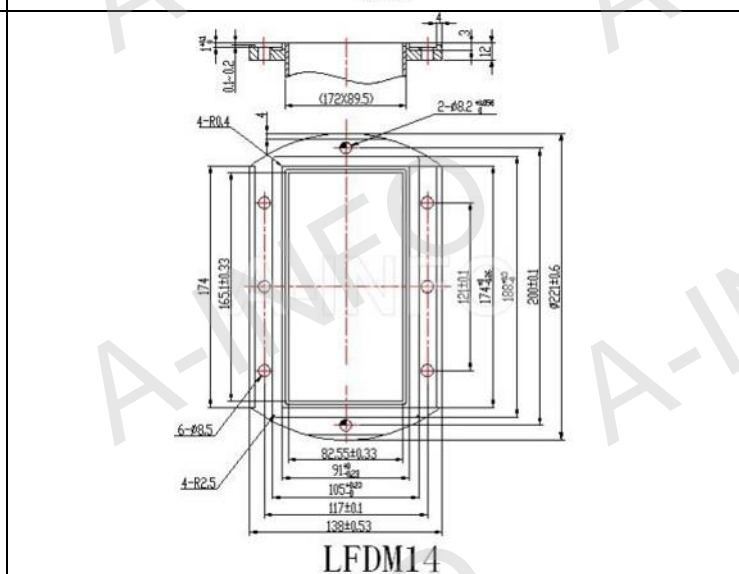
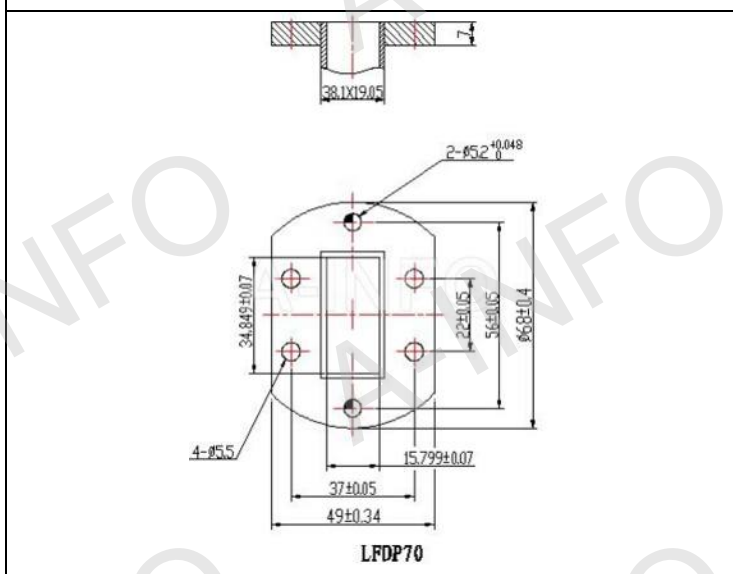
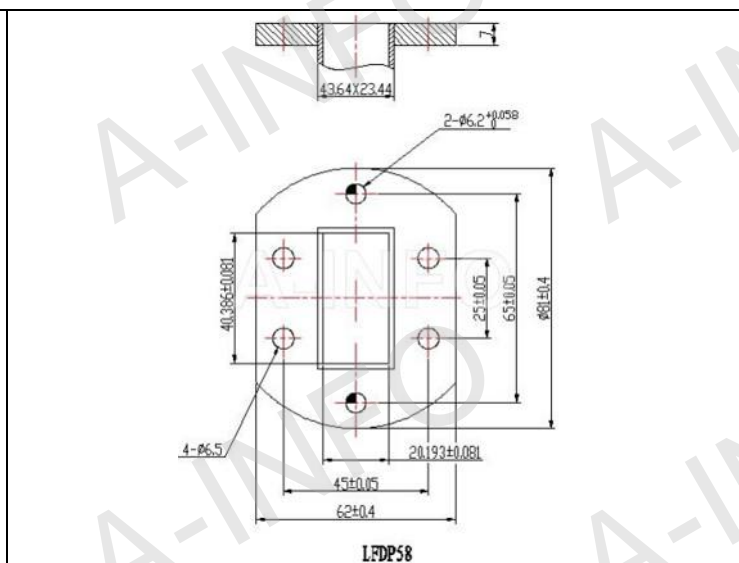
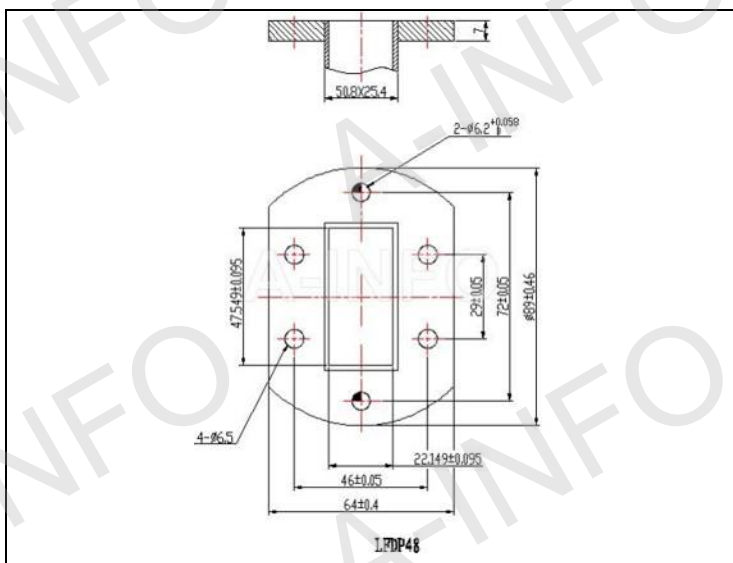


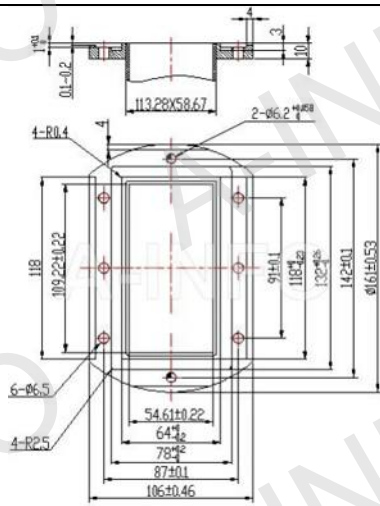




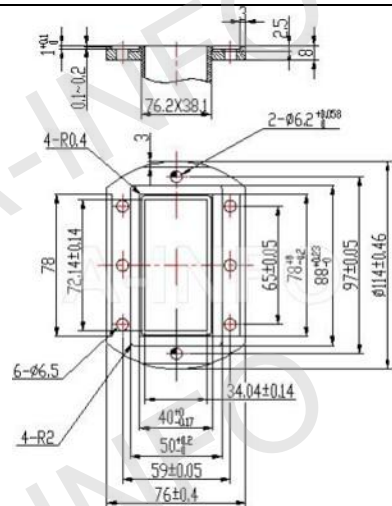
### 3.6 LD Type Flange (LFDP, LFDL)



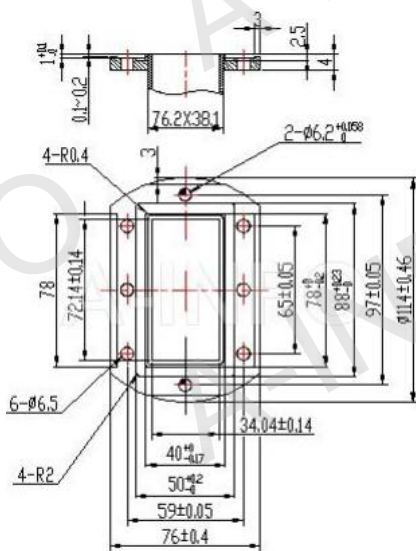




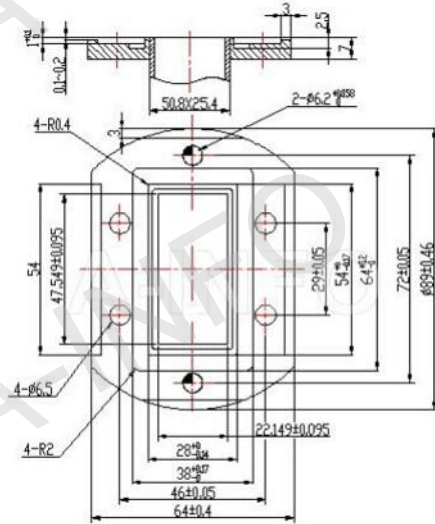
LFD M26



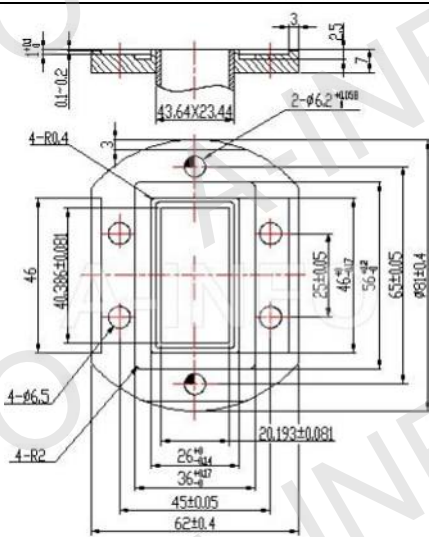
LFD M32



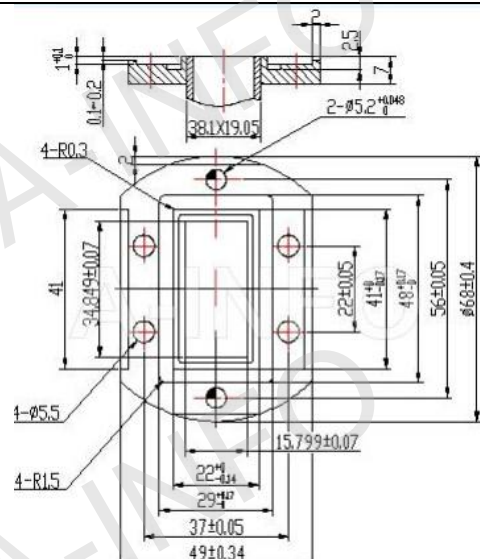
LFD M40



LFD M48

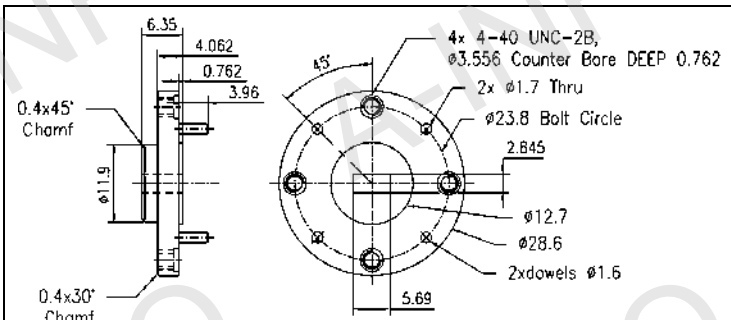


LFD M58

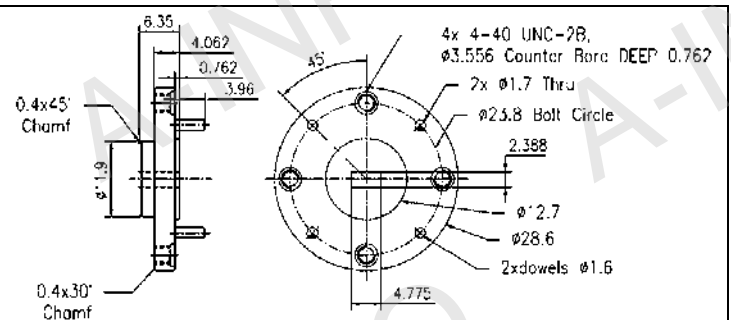


LFD M70

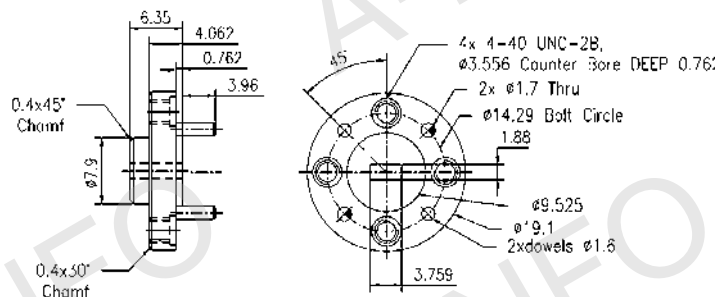
### 3.7 UG Type Flange (FUGP)



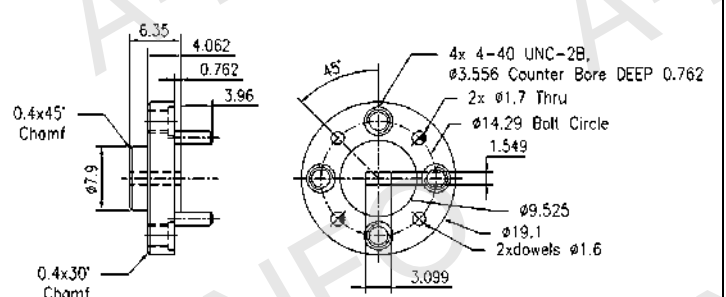
FUGP400  
(equivalent to UG-383/U)



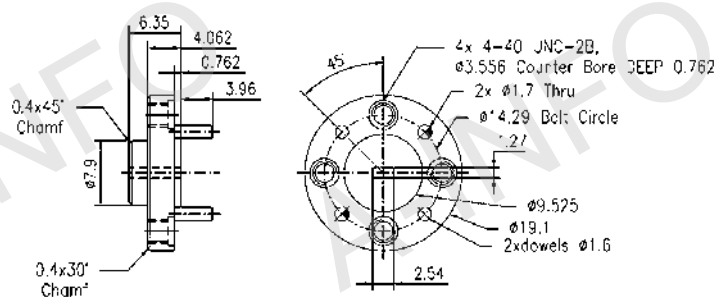
FUGP500  
(equivalent to UG-383/U-M)



FUGP620  
(equivalent to UG-385/U)



FUGP740  
(equivalent to UG-387/U)



FUGP900  
(equivalent to UG-387/U-M)

### Precision Flange Information

#### 1. Precision Flange Information

EIA WR	A-INFO Precision Flange	Maury MPF Equivalent	Mates with						
			UG	EIA CPR	CMR	A-INFO Flange (IEC Standard)			
						FAP(UAR)	FDP(UDR)	FBP(UBR)	FEP(UER)
WR430	APF430	MPF430	UG435/U				FDP22		
WR340	APF340	MPF340	UG553/U	CPR340F			FDP26		
WR284	APF284	MPF284	UG53/U, UG54A/U	CPR284F/G			FAP32	FDP32	
WR284	APF284B	MPF284B	UG53/U, UG54A/U	CPR284F/G	CMR284		FAP32	FDP32	FEP32
WR284	APF284C	MPF284C	UG53/U, UG54A/U				FAP32		
WR229	APF229	MPF229		CPR229F/G	CMR229		FDP40		FEP40
WR229	APF229B	MPF229B		CPR229F/G			FDP40		
WR187	APF187	MPF187	UG149A/U, UG148B/U	CPR187F/G			FAP48	FDP48	
WR187	APF187C	MPF187C	UG149A/U, UG148B/U				FAP48		
WR159	APF159	MPF159		CPR159F/G	CMR159		FDP58		FEP58
WR159	APF159B	MPF159B		CPR159F/G			FDP58		
WR137	APF137	MPF137	UG344/U,UG343A/U	CPR137F/G			FAP70	FDP70	
WR137	APF137C	MPF137C	UG344/U,UG343A/U				FAP70		
WR112	APF112	MPF112	UG51/U	CPR112F/G			FDP84	FBP84	
WR112	APF112B	MPF112B	UG51/U, UG52A/U					FBP84	
WR90	APF90	MPF90	UG39/U,UG40A/U	CPR90F/G			FDP100	FBP100	
WR90	APF90A	MPF90A	UG39/U,UG40A/U		CMR90			FBP100	FEP100
WR90	APF90B	MPF90B	UG39/U,UG40A/U					FBP100	
WR75	APF75A	MPF75A	M3922/70-004 and -005					FBP120	
WR75	APF75B	MPF75B	M3922/70-004 and -005					FBP120	
WR62	APF62	MPF62	UG-419/U or UG541A/U					FBP140	
WR51	APF51A	MPF51A	M3922/70-010,-011,-012,-022,-023 and -024						
WR51	APF51B	MPF51B	M3922/70-010,-011,-012,-022,-023 and -024						
WR51	APF51C	MPF51C						FBP180	
WR42	APF42	MPF42	UG595/U or UG596/U					FBP220	
WR34	APF34	MPF34	UG-1530/U,UG595/U or UG596/U						
WR28	APF28	MPF28	UG599/U or UG600/U					FBP320	
WR22	APF22	MPF22	UG383/U (FUGP400)						
WR22	APF22A	MPF22A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR19	APF19	MPF19	UG383/U-M (FUGP500)						
WR19	APF19A	MPF19A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR15	APF15	MPF15	UG385/U (FUGP620)						
WR15	APF15A	MPF15A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR12	APF12	MPF12	UG387/U (FUGP740)						
WR12	APF12A	MPF12A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR10	APF10	MPF10	UG387/U-M (FUGP900)						
WR10	APF10A	MPF10A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						

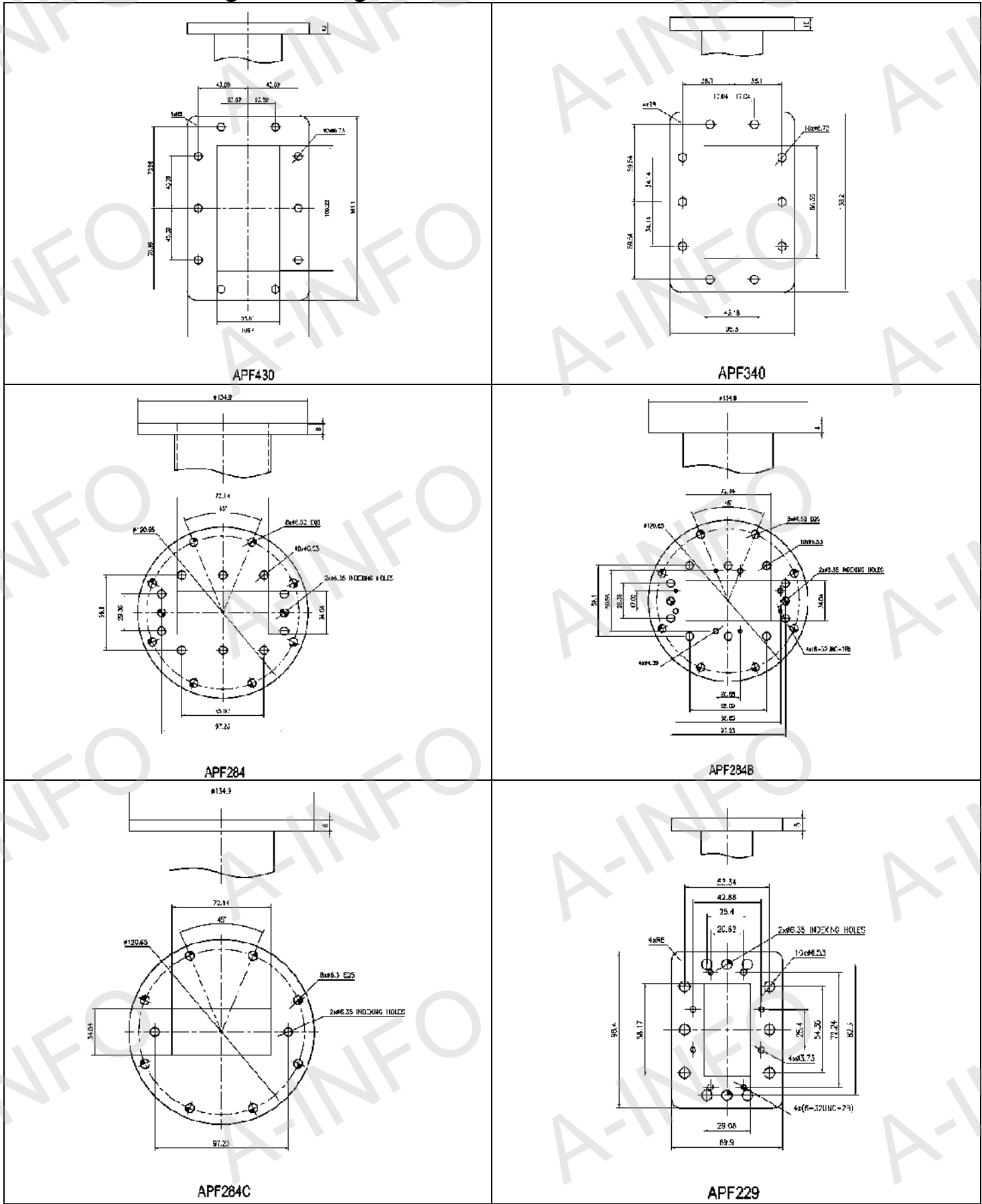
EIA WR	A-INFO Precision Flange	Maury MPF Equivalent	Mates with						
			UG	EIA CPR	CMR	A-INFO Flange (IEC Standard)			
						FAP(UAR)	FDP(UDR)	FBP(UBR)	FEP(UER)
WR8	APF8	-	UG387/U-M						
WR6	APF6	-	UG387/U-M						
WR5	APF5	-	UG387/U-M						
WR4	APF4	-	UG387/U-M						
WR3	APF3	-	UG387/U-M						

## 2. Precision Flange Indexing Pins

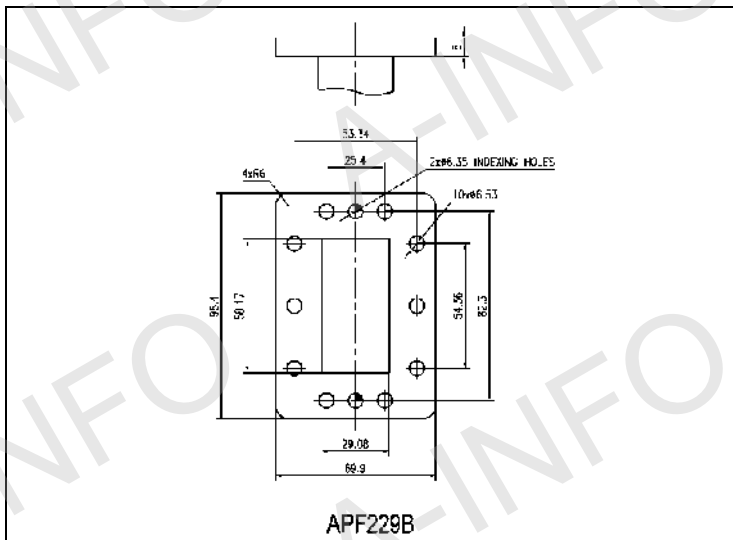


Used On WR	P/N	L(mm)	D (inch)	D (mm)
430, 340, 284, 229, 187	APFP-6-1	40.6	0.2489	6.32
	APFP-6-2	25.4		
159, 137	APFP-4-1	38.1	0.1864	4.73
	APFP-4-2	19.1		
112, 90, 75, 62, 51	APFP-3-1	34.8	0.1239	3.15
	APFP-3-2	15.7		
42, 28, 22, 19	APFP-2-1	25.4	0.0931	2.36
	APFP-2-2	9.4		
15, 12, 10	APFP-1-1	8.9	0.062	1.57
	APFP-1-2	10.5		
8, 6, 5, 4, 3	APFP-1-1	8.9	0.062	1.57

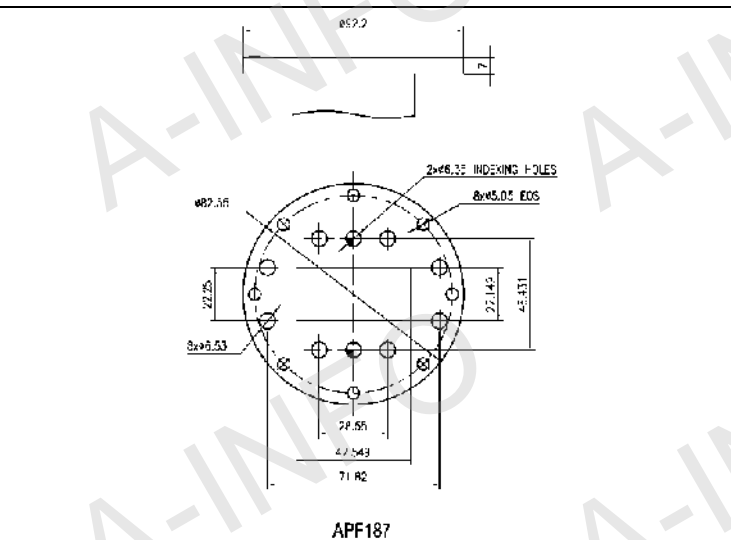
### 3. Precision Flange Drawing



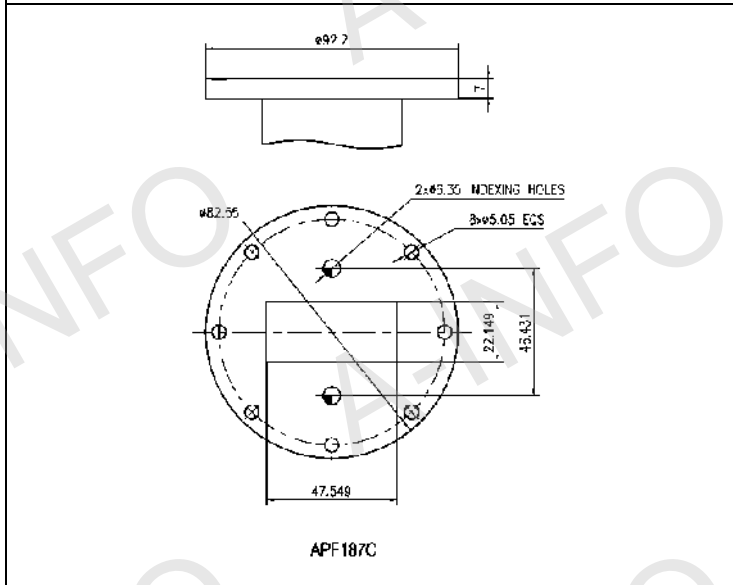




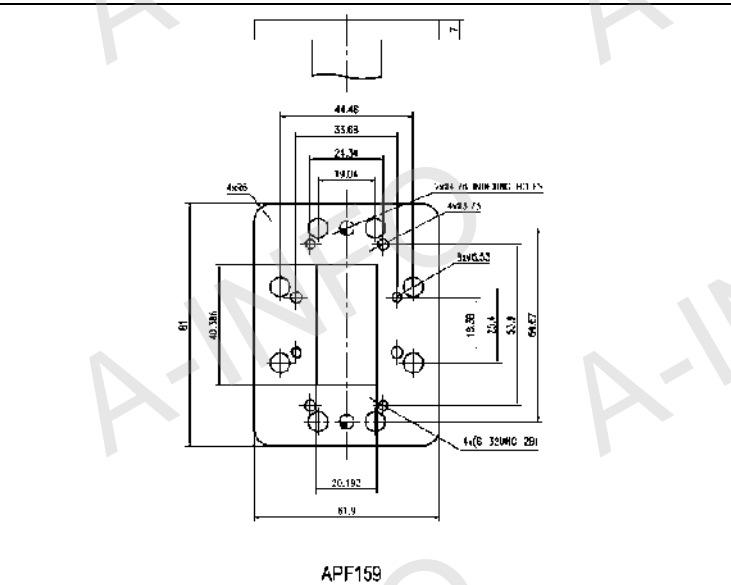
APF229B



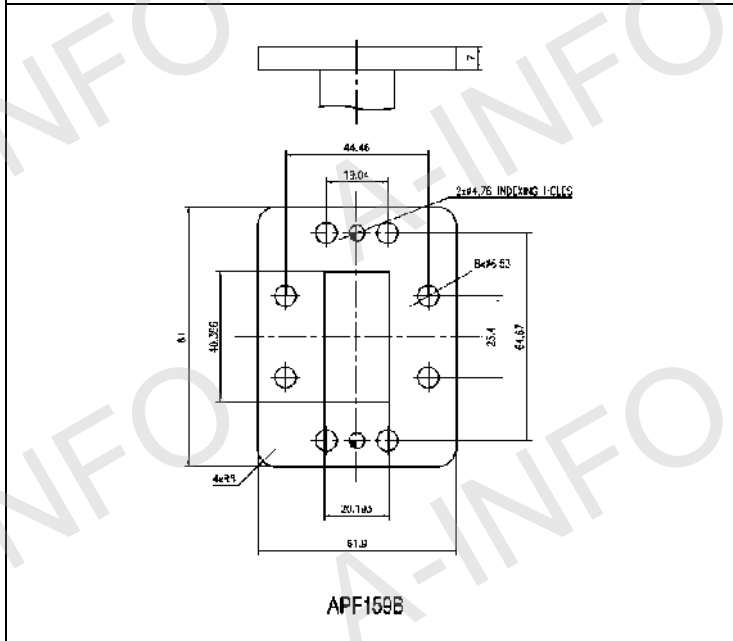
APF187



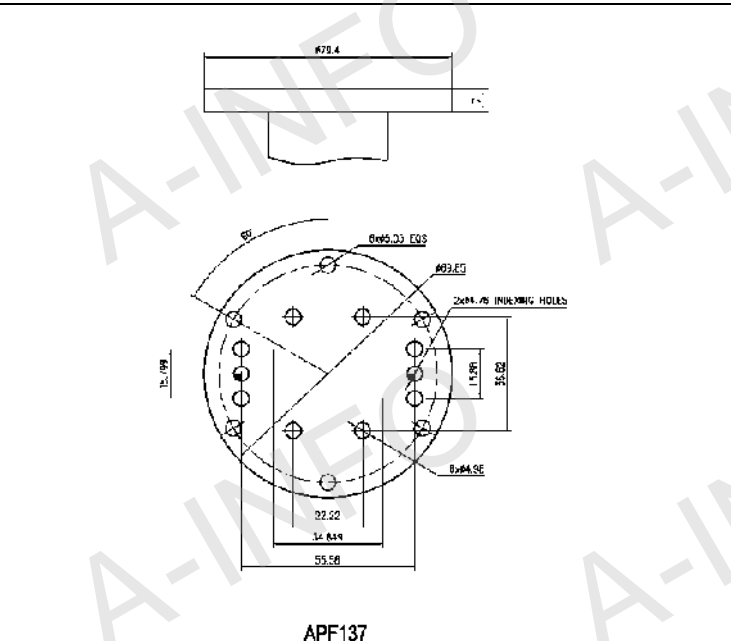
APF187C



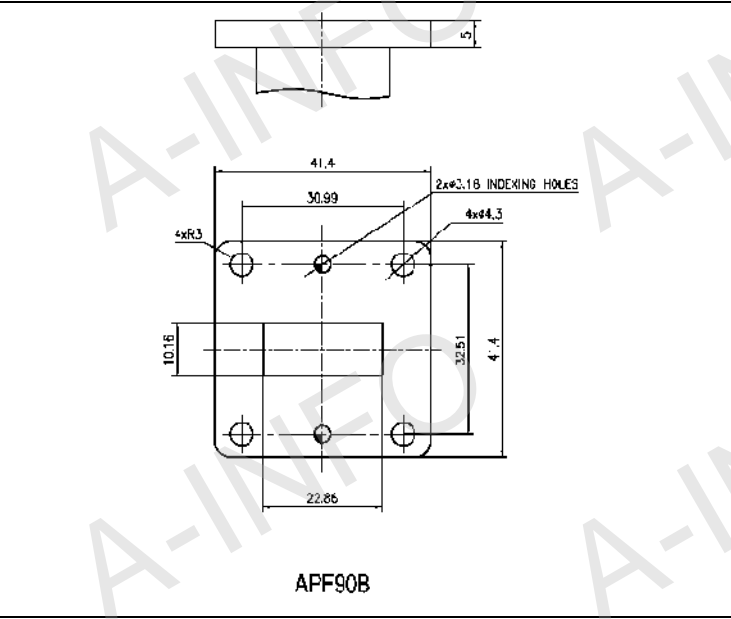
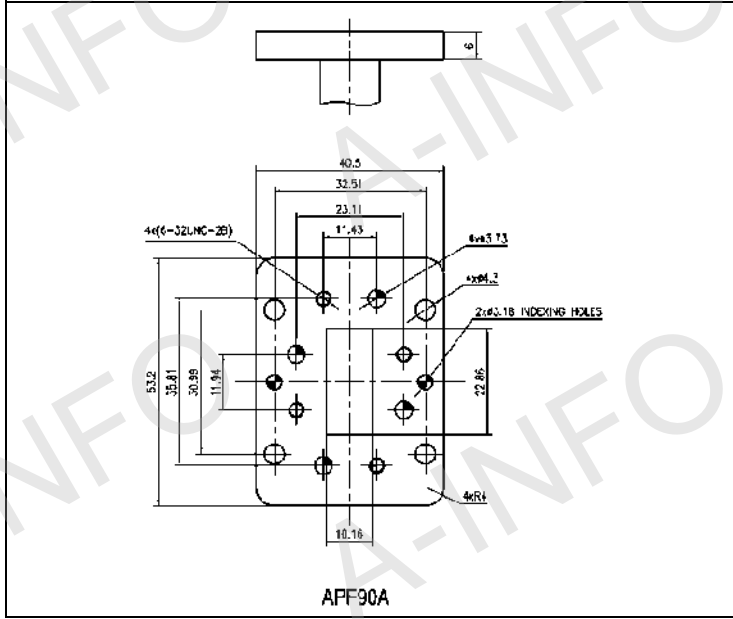
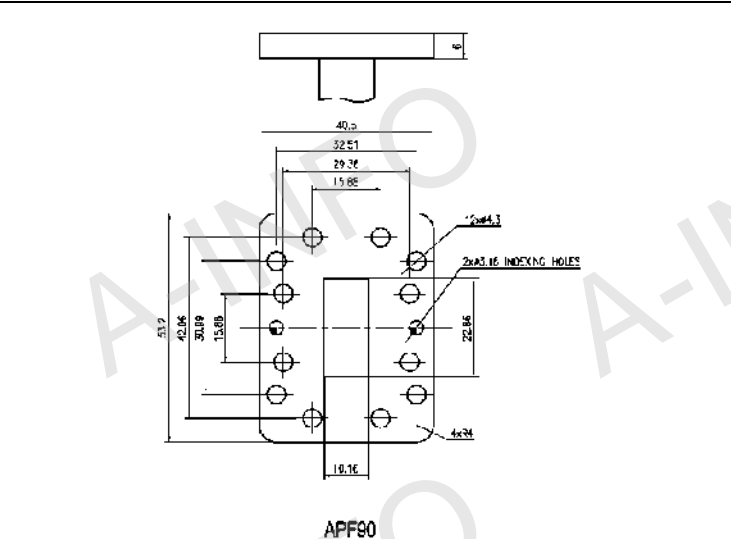
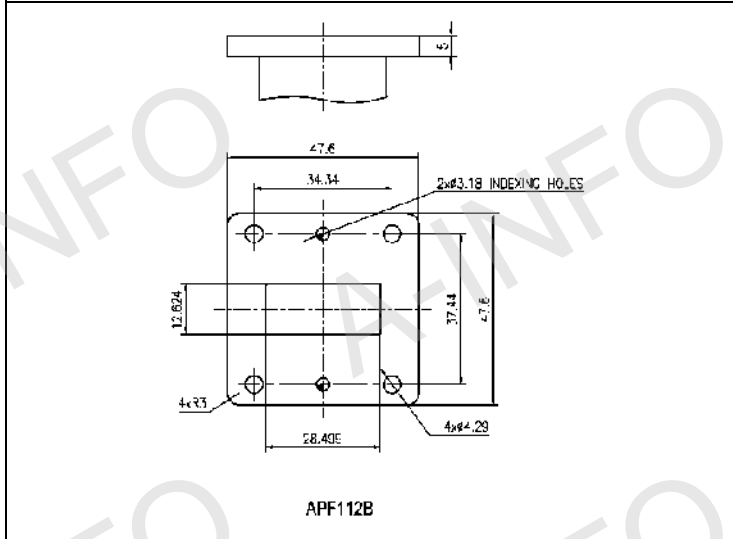
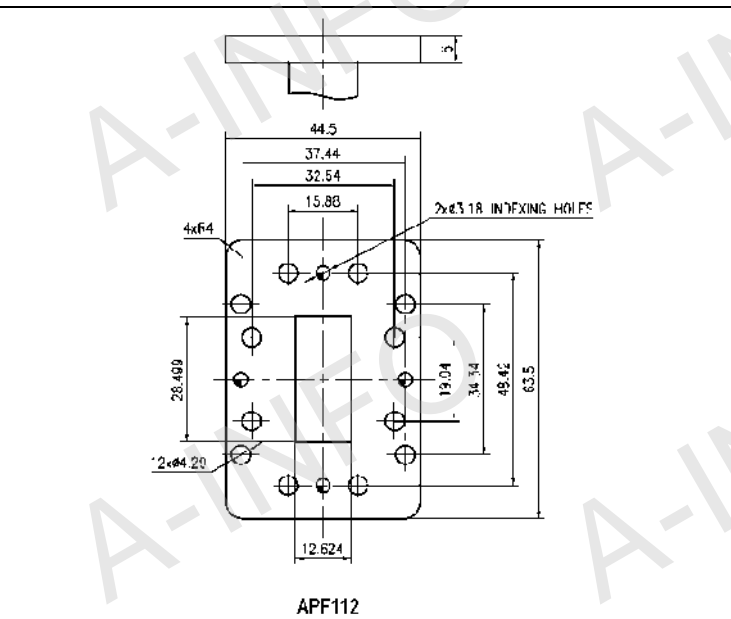
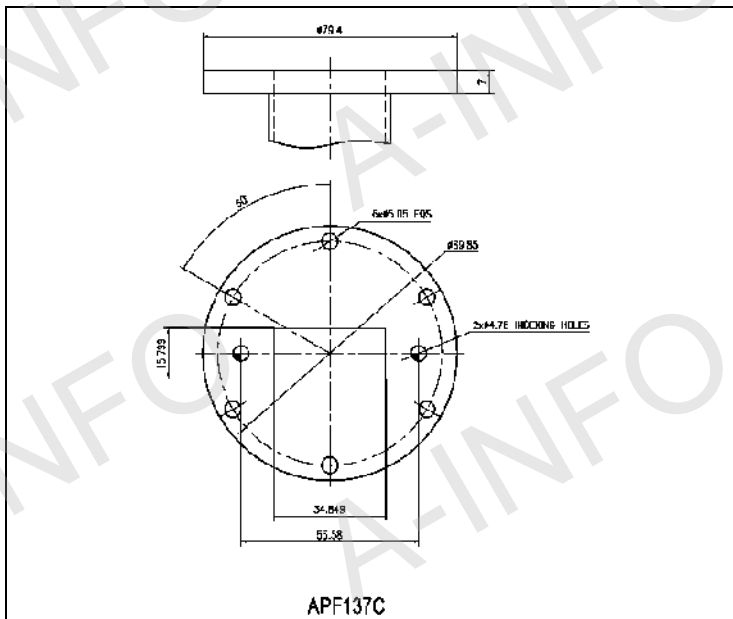
APF159

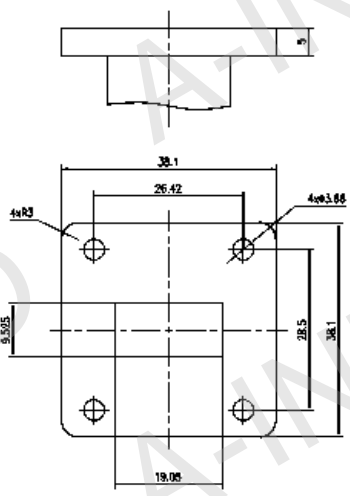


APF159B

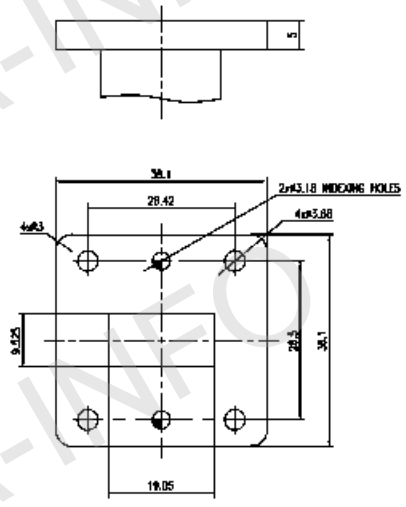


APF137

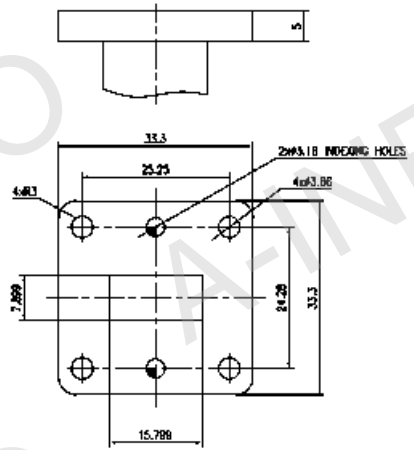




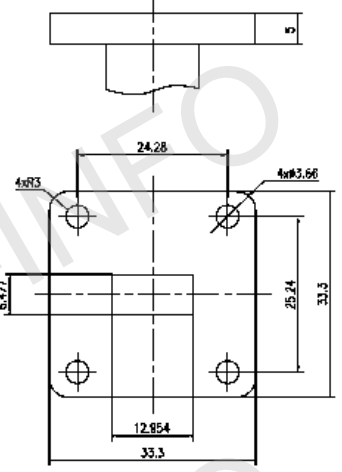
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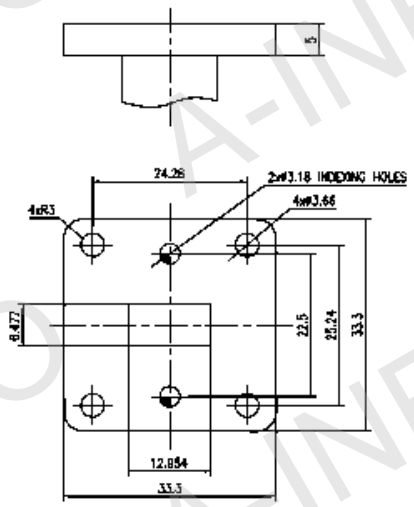
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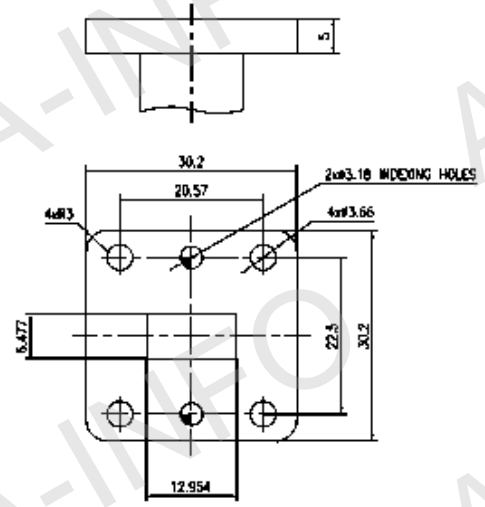
APF62



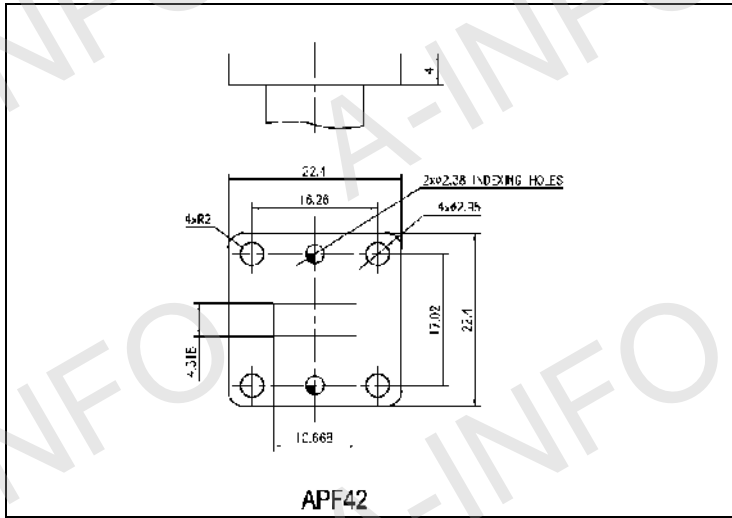
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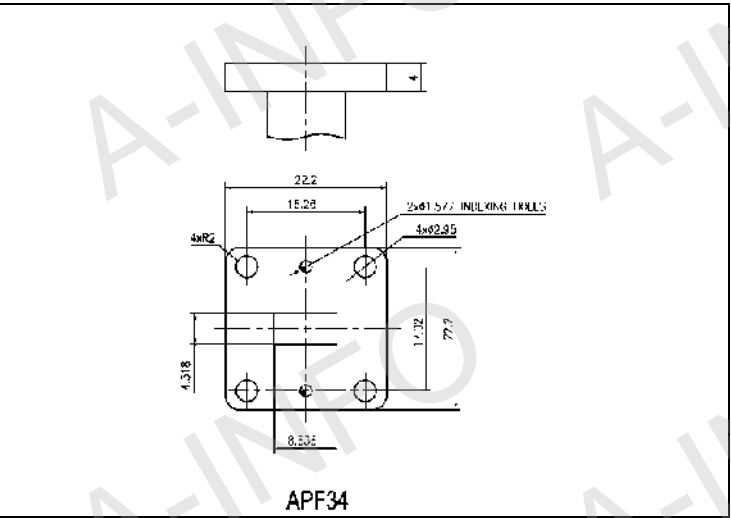
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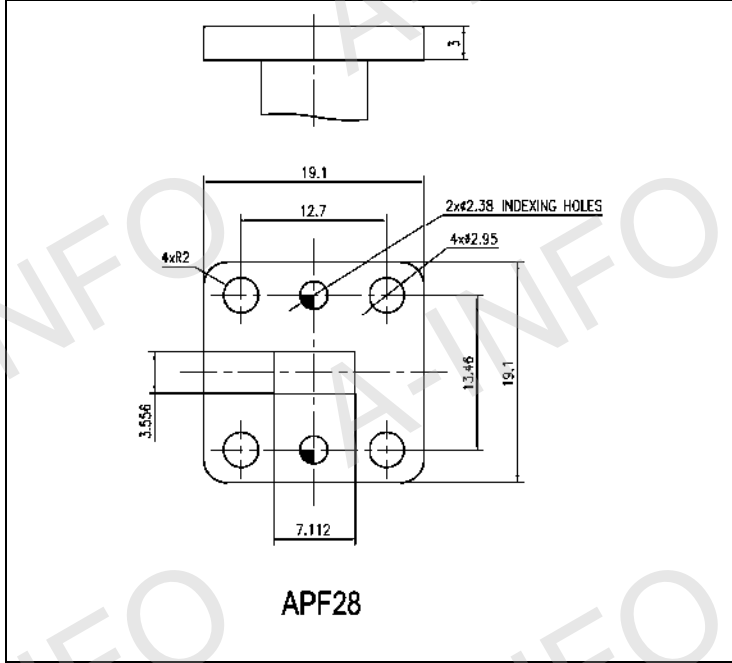
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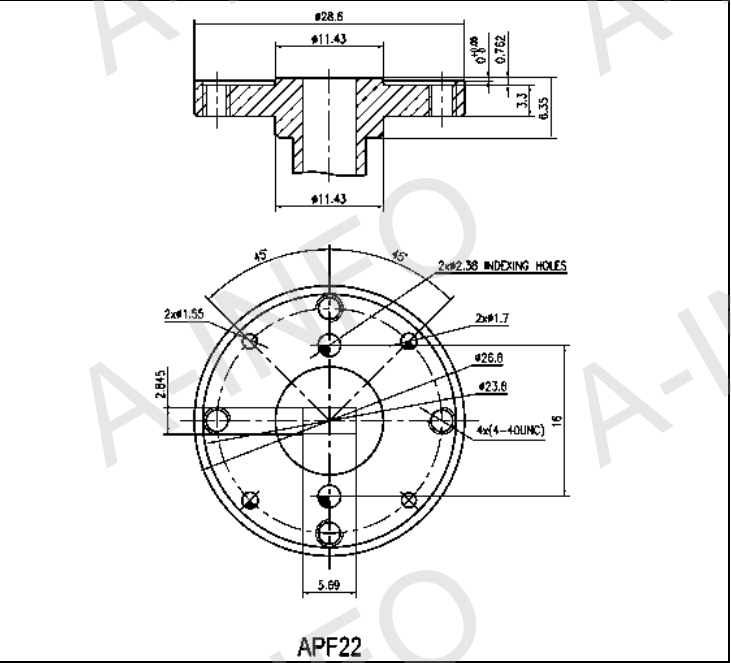
APF42



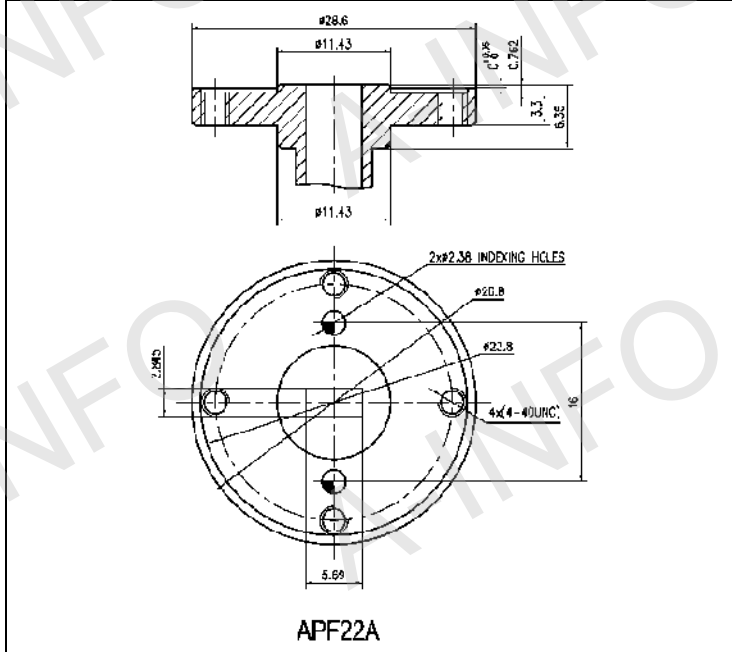
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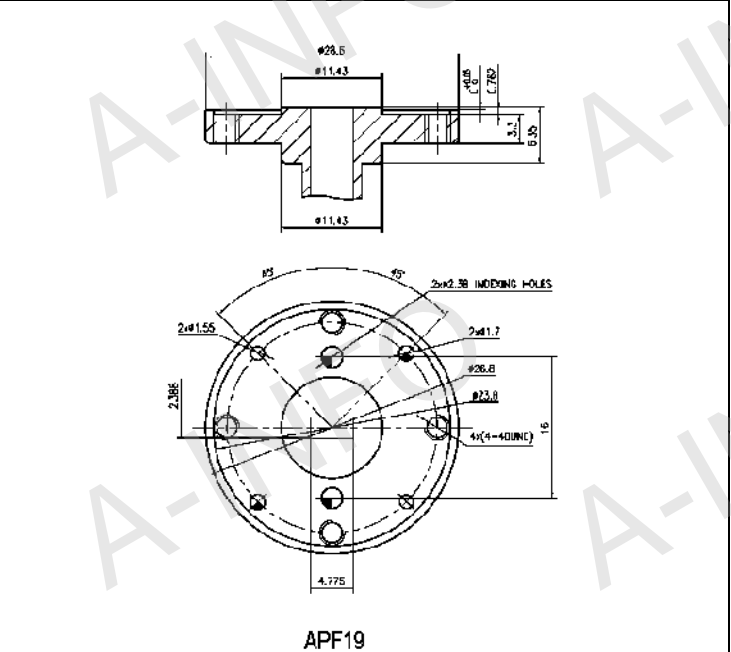
APF28



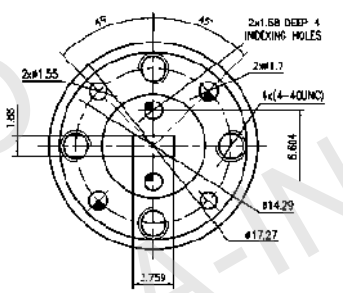
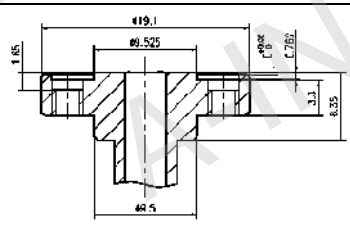
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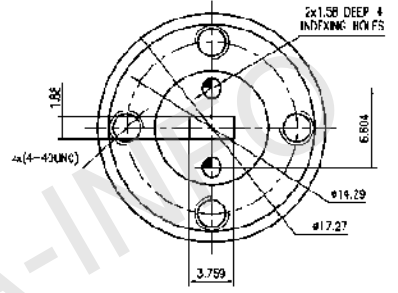
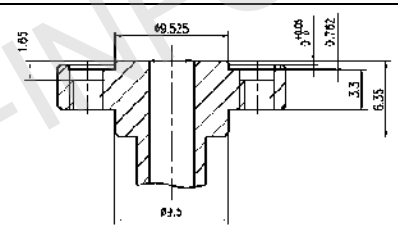
APF22A



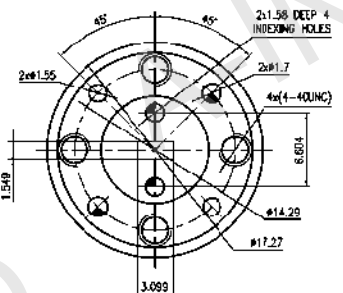
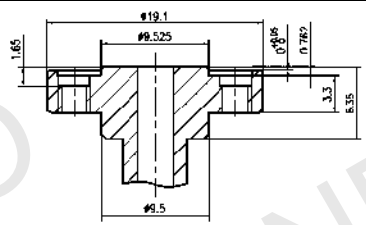
APF19



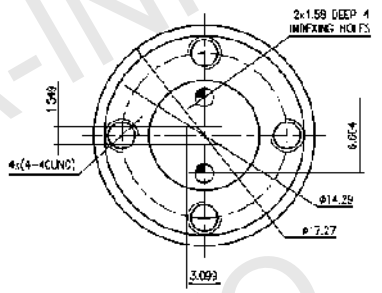
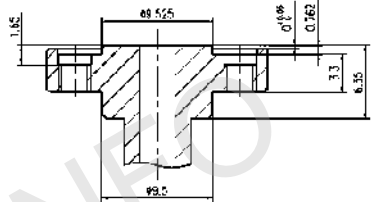
**APF15**



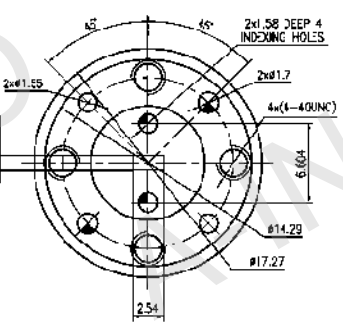
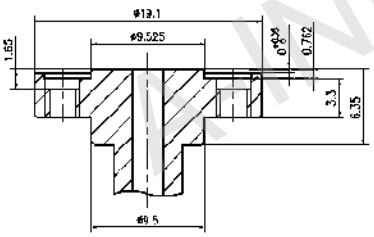
**APF15A**



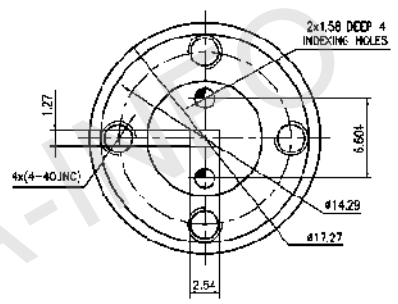
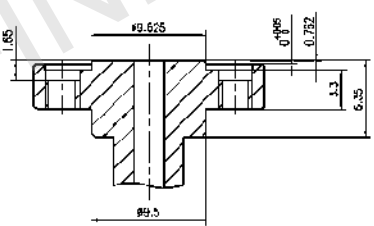
**APF12**



**APF12A**



**APF10**



**APF10A**

### Double Ridge Flange Information

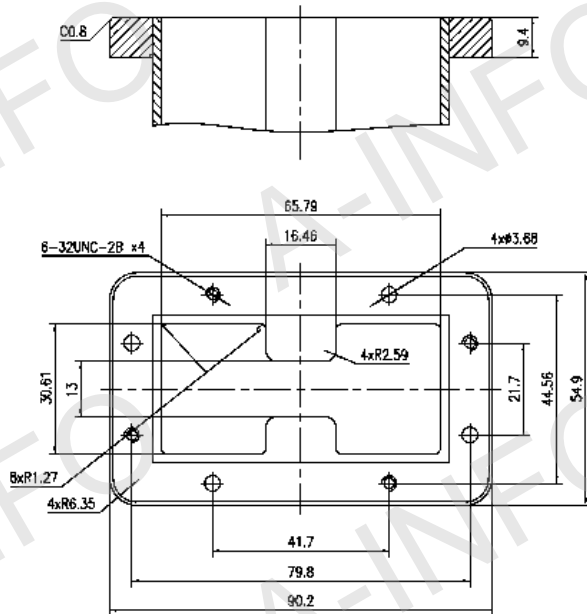
#### 1. Double Ridge Flange Information

EIA WRD	Cover Flange	Cover Flange
WRD84	FPWRD84D24	-
WRD200	FPWRD200D24	-
WRD250	FPWRD250D30	-
WRD350	FPWRD350D24	-
WRD475	FPWRD475D24	FMWRD475D24
WRD580	FPWRD580D28	FMWRD580D28
WRD650	FPWRD650D28	FMWRD650D28
WRD750	FPWRD750D24	FMWRD750D24
WRD110	FPWRD110C24	FMWRD110C24
WRD180	FPWRD180C24	FMWRD180C24

### 2. Double Ridge Flange Drawing

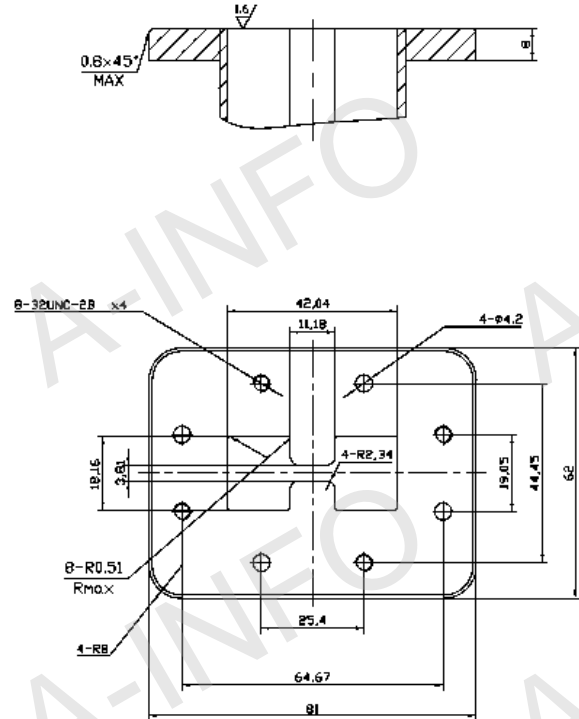
#### FPWRD200D24

(With four through mounting holes and four screws holes)



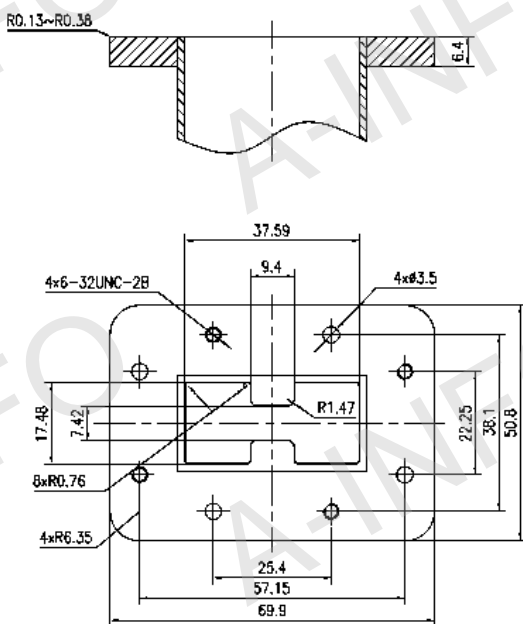
#### FPWRD250D30

(With four through mounting holes and four screws holes)



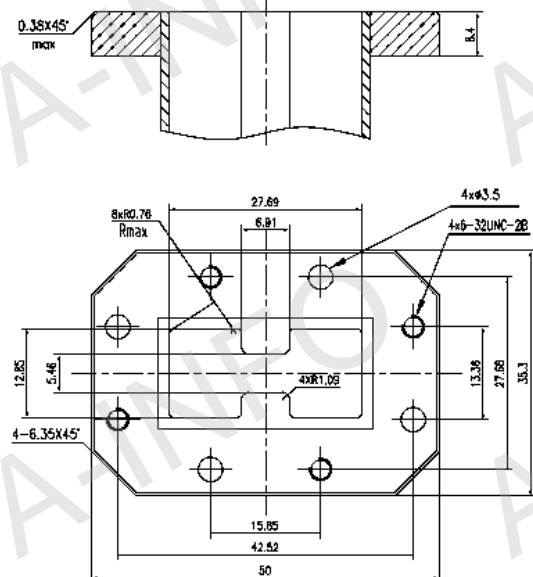
#### FPWRD350D24

(With four through mounting holes and four screws holes)



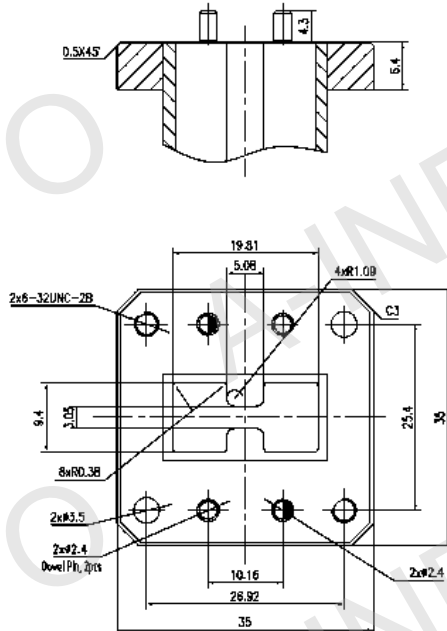
#### FPWRD475D24

(With four through mounting holes and four screws holes)



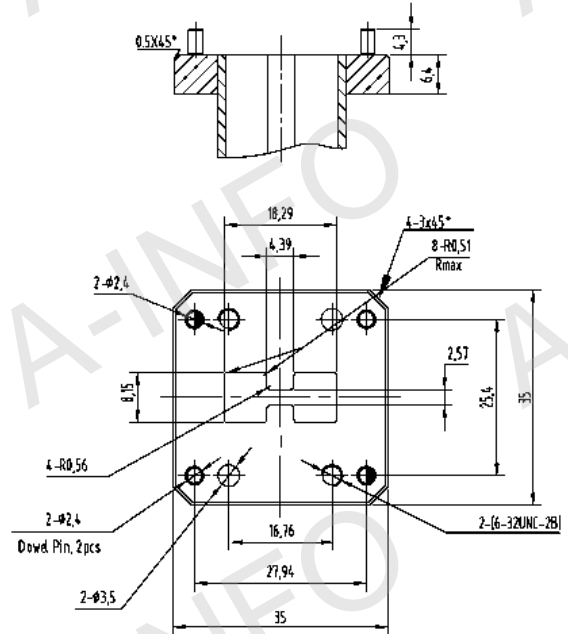
### FPWRD580D28

(With two through mounting holes and two screws holes)



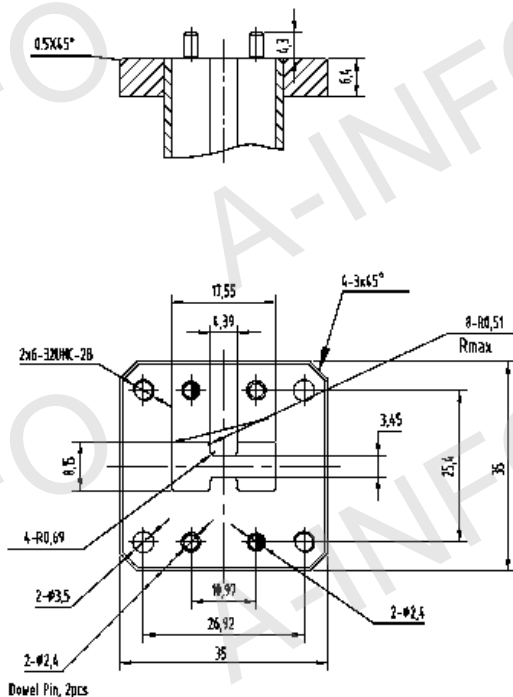
### FPWRD650D28

(With two through mounting holes and two screws holes)



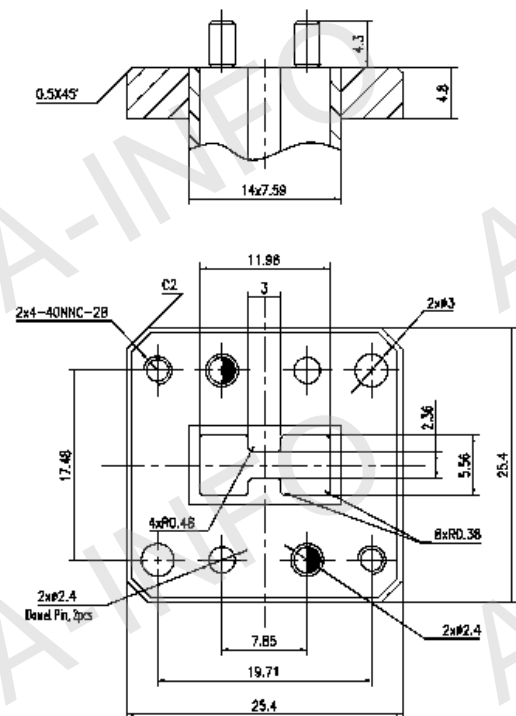
### FPWRD750D24

(With two through mounting holes and two screws holes)



### FPWRD110C24

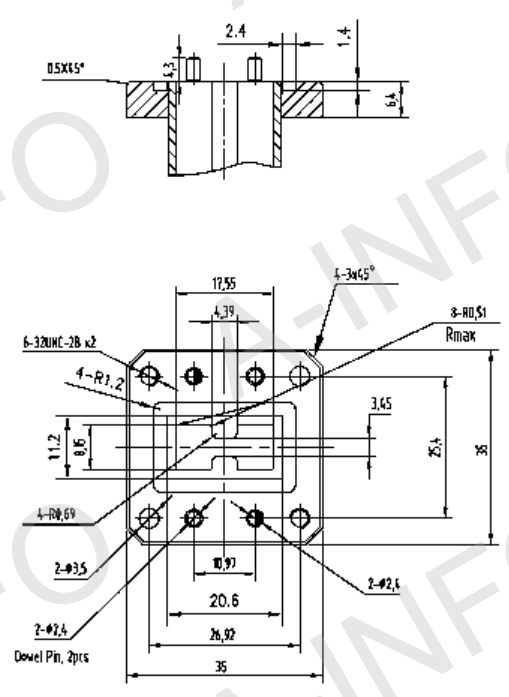
(With two through mounting holes and two screws holes)





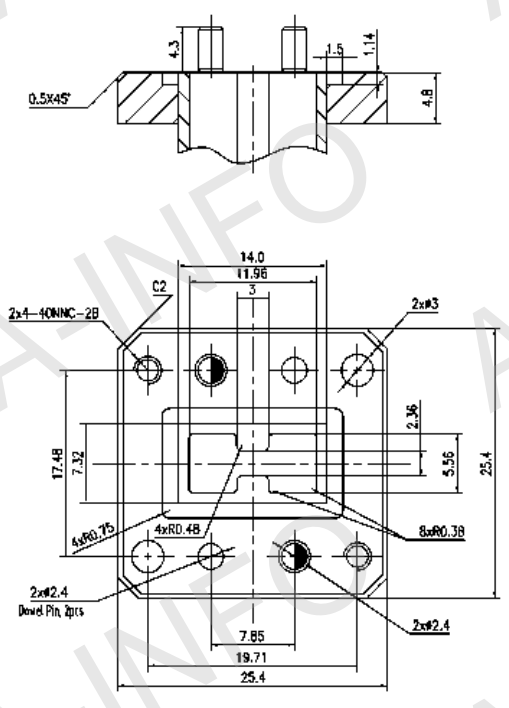
### FMWRD750D24

(With two through mounting holes and two screws holes)



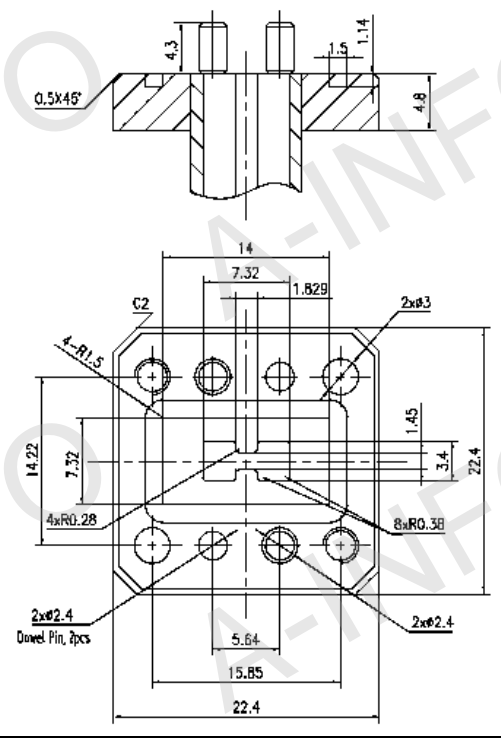
### FMWRD110C24

(With two through mounting holes and two screws holes)



### FMWRD180C24

(With two through mounting holes and two screws holes)



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